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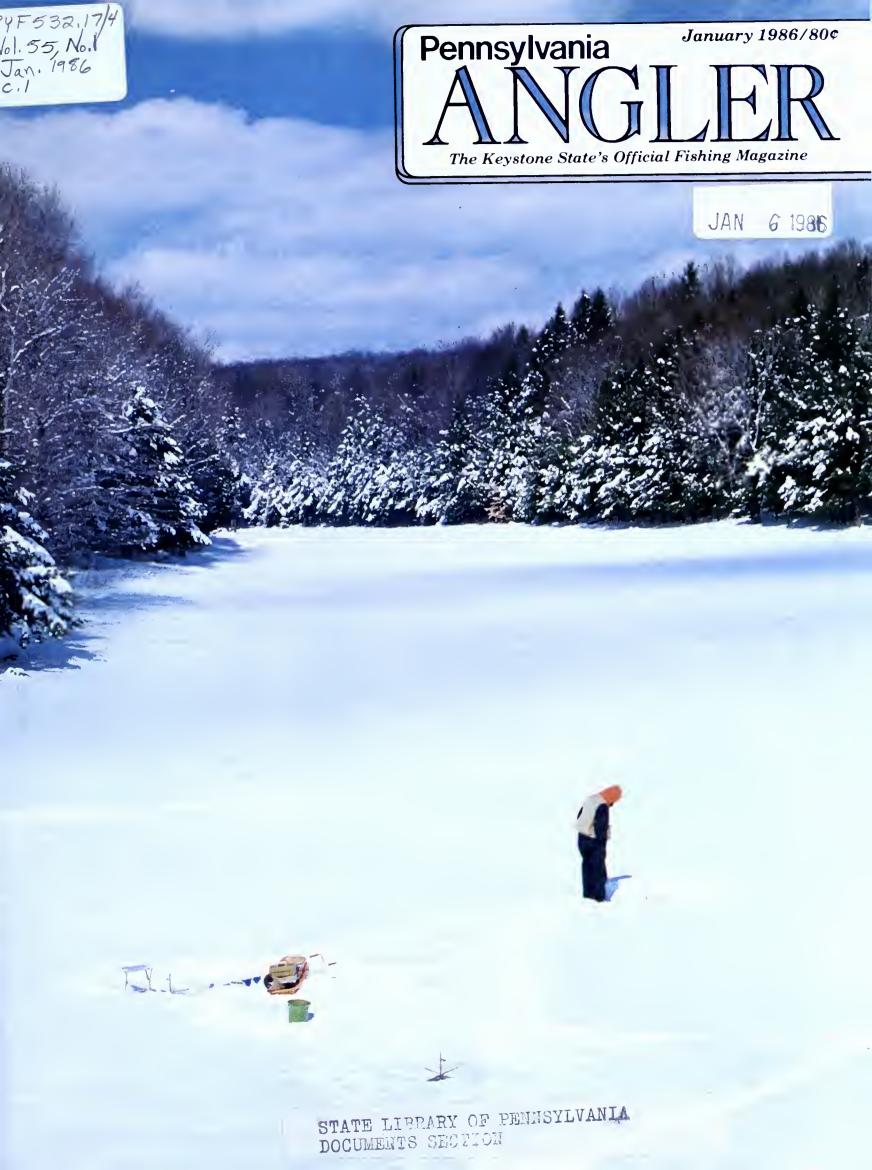


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Straight Talk

STRATEGIC GREAT LAKES FISHERIES MANAGEMENT PLAN

In June 1981, 12 state, provincial, and federal agencies signed a Joint Strategic Plan for the management of the Great Lakes fisheries. This was the result of three years of hard work by steering committees, a Committee of the Whole, working groups, and the Great Lakes Fishery Commission. The plan recognizes that only through cooperation can the mechanisms for protecting, rehabilitating, and wisely using our Great Lakes fishery resources be strengthened. The backbone of this cooperation is in Lake Committees, and as you can imagine, Pennsylvania's interest is in the Lake Erie Committee, where we are joined by Michigan, Ohio, New York, and the Canadian province of Ontario.

At a meeting in Washington in June 1985, hosted by the U.S. Fish



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

and Wildlife Service and the National Marine Fisheries Service, a Great Lakes Caucus of state directors listed and reviewed 40 major areas of concern relating to management of the Great Lakes fishery.

In the process of identifying the critical issues and strategies that pertain to the Great Lakes fisheries for the rest of the 1980s, that caucus determined that the previously adopted Strategic Great Lakes Fisheries Management Plan (SGLFMP) was still relevant, but that a review of the progress achieved in the plan's implementation was much needed. The caucus concluded that the key issues concerned the need for integrated fishery management plans for each lake, for improved jurisdictional coordination, for greater emphasis on environmental problems, for coordinated enforcement, and for directed research, and that these needs could be handled within the framework of SGLFMP.

Therefore, the state directors in that Great Lakes Caucus petitioned the Great Lakes Fishery Commission to reconvene the Committee of the Whole, and we are pleased to report to you that the committee will meet in Toronto, Ontario, in February 1986.

At that time, the directors of the agencies will consider a number of issues, including the role of the Great Lakes Fishery Commission, the role of Indian tribes, the role of fisheries agencies in the Habitat Advisory Board, an update on directed research, and certainly the progress in recent law enforcement initiatives. The committee will be reviewing how efforts of allied experts in habitat, law enforcement, research, sea lamprey

control, fish pathology, and fish culture are being utilized in the Strategic Management Plan. A good look at the predator/forage communities in Lake Erie is very high on our agenda, as well as possibilities of use of common advisories of contaminant levels in fish flesh.

We have seen considerable give and take over the years relative to Lake Erie, and these things do drag on; but that is unavoidable. Our own staff is deeply committed to working on lakewide management plans with fish community objectives, and these, of course, will have to be general, flexible, and dynamic. With so many things beyond our control, if something happens that we don't expect, predict, or control, we have to adjust to fit the reality.

There are only three people who signed the original Strategic Plan in 1981 who are still working on the same jobs, and I happen to be one of them. I am convinced that although much of the leadership has changed, the new participants certainly have the background and the potential of being the same stalwarts who put together one of the finest strategic plans ever to be conceived.

The common goal statement adopted in 1981 still applies: "To secure fish communities, based on foundations of stable, self-sustaining stocks, supplemented by judicious plantings of hatchery-reared fish, and provide from these communities an optimum contribution of fish, fishing opportunities, and associated benefits to meet needs identified by society for: wholesome food, recreation, employment and income, and a healthy human environment."

Fælk W. Dhele

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Pennsylvania ANGLER

January 1986 Vol. 55 No. 1

Seven New Year's Resolutions by Art Michaels

Comparative Trouting: Penn's Woods vs. the Mother

Country by S. R. Slaymaker II

Consider this unique perspective on fishing in Pennsylvania and on fishing where our fly fishing traditions originated 6

Pennsylvania Fish Commission Annual Report



The Cover

First on the ice after a snowfall is a lone angler at Glendale Lake, in Prince Gallitzin State Park, Cambria County. The cover picture was taken by staff photographer Russ Gettig.

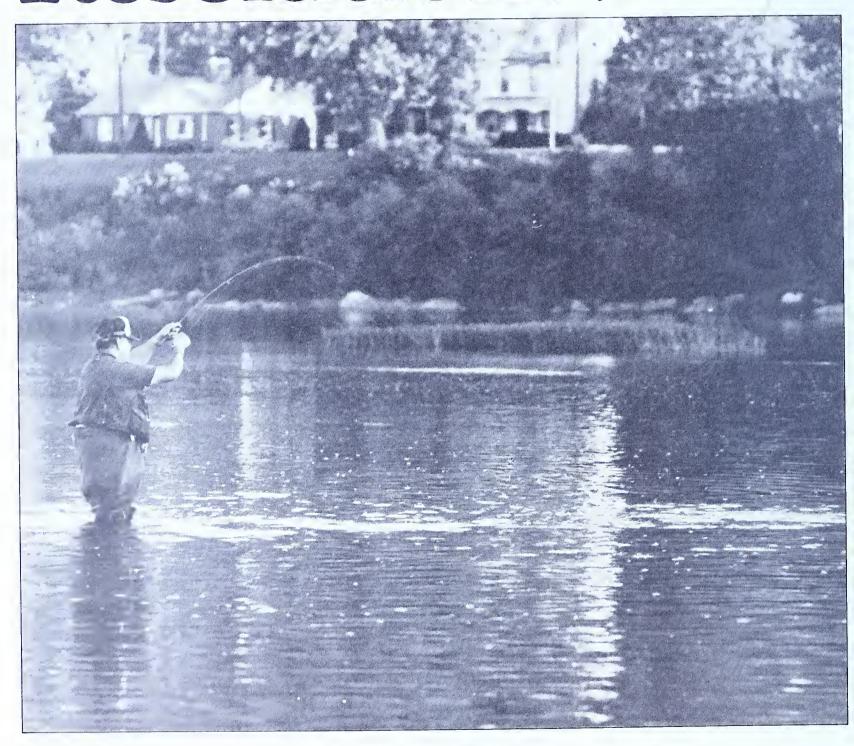
Staff photographer Gettig also caught the back cover scene along a stream near Bellefonte, Centre County.





Much of your fishing success later this year hinges on the plans and preparations you make during the winter.

Seven New Year's Resolutions by Art Michaels



Is gearing up for the coming spring part of your winter routine? Getting ready means first making many plans, so here are some ideas for New Year's resolutions that you may want to consider in the early part of 1986.

Take your children, or your grandchildren, fishing. "Before you know it," my wife said to me the other day, "our son and daughter will be too big to pick up and hold, too big to enjoy the way we enjoy them

now." In my mind, that's reason enough to enjoy fishing with them while the opportunity exists. So my New Year's resolution in this area includes taking the kids fishing often this spring.

Along these lines, if you'd like to take your children fishing for the first time, you may not want to miss the Fish Commission's special publication called, "Teaching a Youngster to Fish." Along with another article, "Teaching a Child to Boat," this 8-page publication offers valuable tips to adults who plan to teach kids to fish and boat. It's available free from the Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

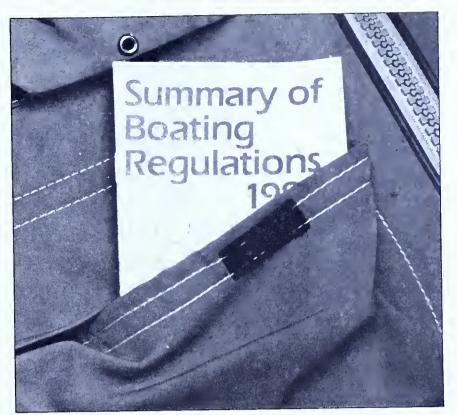
If you'd like to give your kids something extra special this year, consider PLAY—Pennsylvania League of Angling Youth. This Fish Commission program has taught thousands of youngsters about fishing, boating, and conservation, and a yearly membership is only \$2. Each member receives a package of information, a quarterly newsletter, a colorful patch, a membership card, and access to "The Tackle Box," a special correspondence center for personal answers to fishing and boating questions. For details, contact PLAY at the Fish Commission address above.

Make time to go fishing. Sure, we all are busy, but don't you admire people who have the time for fishing when the action is best? You know, the people you read about in *Pennsylvania Angler* who are there at the right time to score like crazy? These anglers don't have the time either, just like you. The secret is that they make the time—that's the difference. This year, make the time to go fishing when the action is hot.

Try new hotspots. In the Angler you will find plenty of tips on taking all kinds of fish, when to go, and exactly what to use at new fishing spots. Instead of just reading about it, get out and go to new spots this year. Scan the "County Features" series and other articles each month, and when you get the word that the action is fast, go.

Similarly, try some new techniques. There's always new, exciting ways to taking the big ones. Along with finding new places, try some of the techniques described in the Angler.

The first time I tried fishing plastic worms for largemouth bass was a result of reading about it in



This winter, resolve to be a safer boater, and check into courses offered by organizations like the U.S. Coast Guard Auxiliary, U.S. Power Squadrons, and Red Cross.

Pennsylvania Angler many years ago. I went to the lake the author suggested and I fished when he said to try my luck. I used the rigs and gear he described. In two hours, I boated a 5-pounder, my heart pounding as I horsed the fish over the gunwale with the black grape worm draped across the gill cover.

It works. Do it. Try some new techniques this year, and you probably can expect similar new, exciting results.

5 Be a safer boater. Boating accident statistics compiled by the Fish Commission and the Coast Guard are sobering—most boating accidents are caused by operator carelessness. Part of this New Year's resolution includes taking advantage of boating courses offered this winter by groups like the Coast Guard Auxiliary, U.S. Power Squadrons, and the American Red Cross.

In addition, the Fish Commission Bureau of Waterways Boating Education Section offers instructor training in its boating and water safety awareness program. The course, designed for use in Pennsylvania schools, promotes boating and water safety by combining classroom knowhow with on-the-water experience. Interested in more details? Contact Janet R. Mayer at the Commission's Harrisburg headquarters. The phone number is 717-657-4540.

6 Along with being a safer boater, this year ensure that everyone in your boat wears a PFD (personal

flotation device). These items are lifesavers. Fish Commission experts estimate that 85 percent of the deaths in Pennsylvania boating accidents could have been prevented if victims had been wearing PFDs.

Want more details on PFDs to study this winter? Request the pamphlet, "Personal Flotation Devices," from the Fish Commission at the address above. It's free, but with requests include a self-addressed, stamped business-sized envelope.

Get your tackle in top shape. This New Year's resolution means repairing and maintaining gear so that in spring you can concentrate on fishing. With a lot of equipment, if you start on your tackle now, the job may take the entire winter. This work includes cleaning and oiling reels; replacing line; inspecting, repairing, and replacing rod guides and components; sharpening hooks; emptying and dry cleaning your fishing shirt or vest; boat repair and maintenance; trailer upkeep; and lots of other tasks. Keeping the tackle box clean protects gear better, so empty your tackle boxes this winter and scrub them out.

Remember that the first three months or so of the New Year offer a chance for renewing your commitment to fishing and to safe boating, so be sure to take full advantage of all the opportunities.

Art Michaels is editor of Pennsylvania Angler and Boat Pennsylvania.

Comparative Trouting:

Penn's Woods vs. The Mother Country

by S. R. Slaymaker, II

Pennsylvania, it has shared with Great Britain more than a common language: law, self-government, bucolic vistas, for example, not to mention a sport fishing tradition that goes back to the 15th century. It was fishing, together with a visit to our son at Cambridge University, that brought my wife and me to England last July. Ours was a gratifying experience. Trout fishing was superb. British anglers were a joy to be with. Nonetheless, I left England appreciating Pennsylvania fishing more than ever before.

While boating on Cambridge's historic Cam River, we spotted our first English anglers. They relaxed on the beautifully manicured shores with baitcasting gear, and angled for various panfish and pickerel. On a train ride to our fishing hotel in Devon, we passed numerous slowly meandering rivers and streams which were heavily fished. On every stretch, fishermen sat on chairs beneath large umbrellas; ubiquitous shelters from England's all too common rain squalls. We were told that these people fished in competition for money prizes. This is a far cry from Pennsylvania, where fishing competitions are not as prevalent.

It was obvious that fishing was a very popular English pastime. This, the most common method, is known as "coarse fishing." In general, coarse fishing comprises all freshwater species save trout and Atlantic salmon.

Until comparatively recent times, the best trout and salmon rivers were owned largely by those who controlled England's immense private estates. Now, with their steady reduction, considerable amounts of water are open to fee fishing. Sporting hotels are the principal providers. One of the oldest, at which my wife, Sally, and I stayed, is the Arundell Arms. It is located in Lifton, a small, picturesque village in Devon, at the center of some of the loveliest country in England.

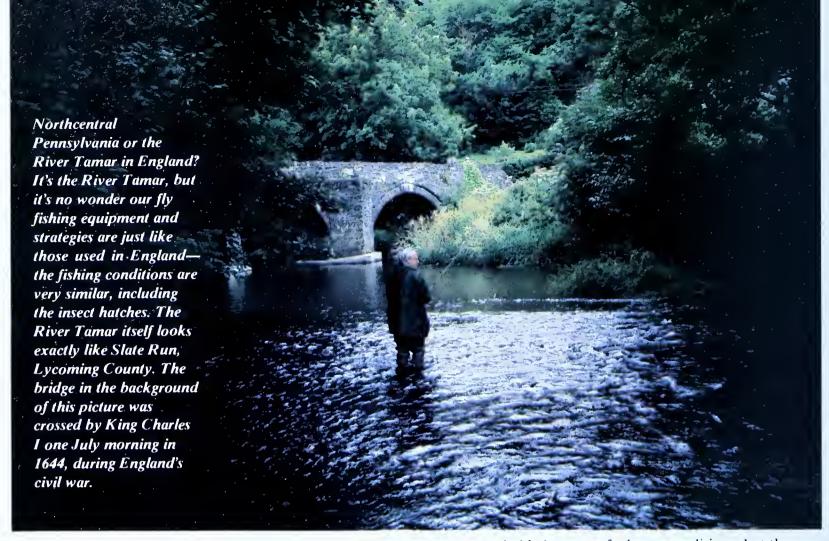
In fact, Sally was impressed with how much Devon looked like Pennsylvania's Lancaster County. Along the River Lyd, for instance, we wondered if people at home would know that our photographs were taken along this English river, and not on Lancaster County's Octoraro Creek.

The Arundell Arms has 20 miles of its own water on the River Tamar and four of its tributaries. These are known as "spate rivers," because they are dependent on rainfall from nearby moors. Then they flow through woods and farmland and become larger and deeper. They provide an infinite variety of water—long, slow pools, gravelly runs and riffles, fast shallows and open glides. They offer fishing similar to the sport available on so many Pennsylvania streams. The Arundell Arms, for example, made us think immediately of Slate Manor on Lycoming County's Slate Run.

"Here," as the hotel guidebook reports, "are the true wild brown trout of Devon—small, shy fish that rise savagely to the fly. By late spring the first salmon arrive, and in midsummer shoals of sea trout bring out the night fishers."

ew Americans are familiar with England's wild "west country" trout. We have been conditioned instead to equate English trout fishing with the famed chalk streams, such as Test and Itchen, where it is customary to "match and hatch" over rising fish. Our Pennsylvania limestoners are classic examples—except that in England most such fish are stocked, while many of our Pennsylvania limestone trout are wild. Even the most dedicated British chalk fishers, however, admit that for sheer fighting power these smaller west-country wild brownies "can't be beat!" After five glorious days of tangling with them, I must agree. And I felt very much at home because in the English west country one fishes "the water," (as we generally do at home) rather than "to the fish," as is the custom in chalk streams.





But in another sense, this was a far cry from Pennsylvania trout fishing, for Sally and I spent each day alone on our "beats."

A beat is a stretch of water appointed to individual anglers. Every evening, beats for the next day are posted on the bulletin board. Anglers have their choice between brown trout, sea trout, and Atlantic salmon, and beats are assigned accordingly. Should you want to fish with another party, you are permitted to do so. My photographer-spouse was my sole companion along, that is, with some curious cows and a few disinterested sheep.

Atlantic salmon and sea-run brown trout make spawning runs from the nearby ocean to the River Tamar and its tributaries. Because the Tamar was high and roily from recent rains, I alloted only one day for salmon. Sea trout are better caught at night with wet flies. But I preferred dry flies and was not interested in night fishing, so I decided to stick with brownies.

There is no difference between British fly fishing gear and ours. Even the flies are alike, as are most fly nomenclatures. Caddis flies are an exception. They are called "sedges." The Wulff series of dry flies are very popular in the English west country. Strict imitation is not a "must" because these wild brownies are not as selective as chalk stream trout. Wulff dries are ideal because they are good floaters, easily seen by fish and fishermen. A lot of sedges were out, so I often fished imitations. Still, Grey Wulffs seemed just as effective. Tackle is sold and rented from "the cockpit" in the hotel garden. This conical structure, built over 200 years ago, is said to be one of the few cock fighting sites which still survives.

I fished several beats on the rivers Thrushel and Lyd. We spent the last day on the Tamar for salmon. Here I draw a

blank, probably because of adverse conditions, but there was action a-plenty during our first four days with the brown trout. Sally (a non-fisher) very much enjoyed walking the beats, what with their convenient paths and benches and varied bird life. We took boxed lunches. One was consumed during a rain squall under a handsome stone bridge that was traversed by King Charles I one July morning in !644 during England's Civil War.

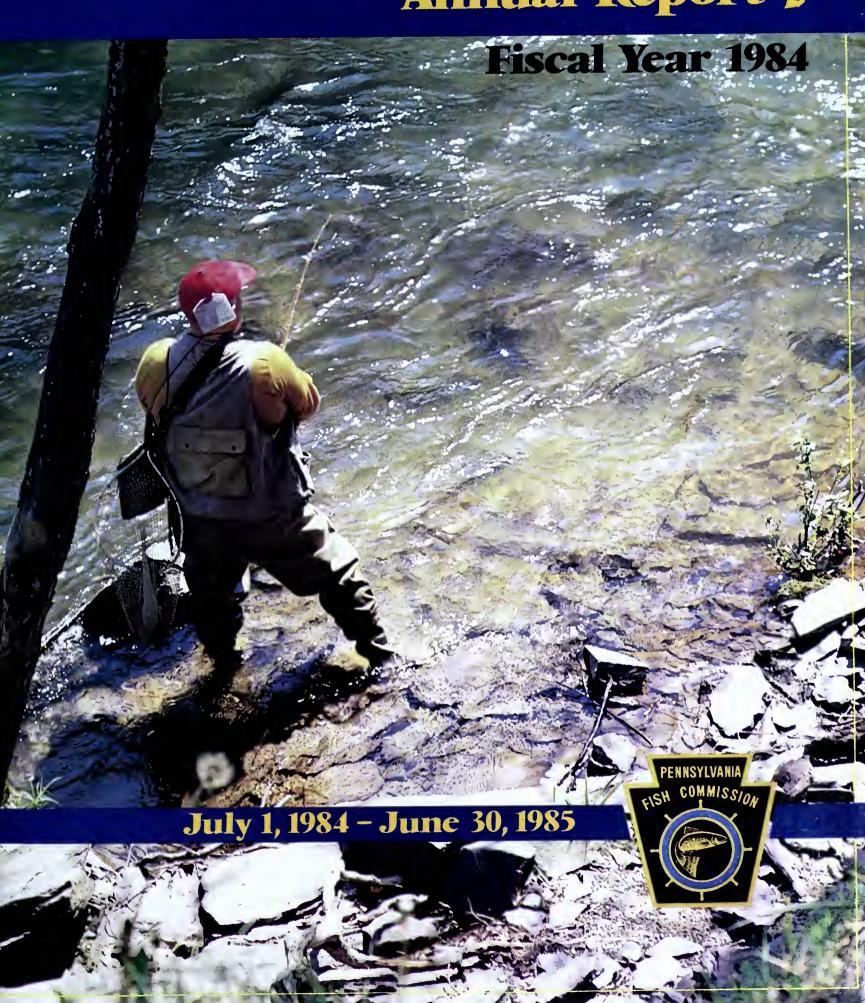
Notwithstanding my exciting fishing experience in England, I could not help but take account of certain plusses enjoyed by Pennsylvania anglers.

First off, British fishing traditions militate against fly fishing for trout by all but a relative handful of fisher folk. True, in the last few years there has been an upsurge of interest in trout fishing. Increasingly, lakes, impoundments, and reservoirs are being used. But in general, the old situation persists—mostly because English trouting is more expensive than coarse fishing.

For the price of a Pennsylvania license, I can find trout here at home at no premium. Pennsylvania has miles and miles of prime trout water with regulations to suit anybody. We even have chalk (limestone) streams with free-rising trout that are, more often than not, wild. And there's a plethora of gamefish in lakes, rivers, and impoundments. We don't have Atlantic salmon, but there are Lake Erie cohos and chinooks, and of course, there's the hard-fighting, delectable American shad, whose annual visitations were welcomed by the first settlers of Penn's Woods. There are no shad running English rivers.

All in all, visiting the place where fly fishing traditions began provides a unique perspective on fishing in Pennsylvania. We're lucky to have such resources, especially at the places we call "home."





uring this, the 119th year in the history of the Pennsylvania Fish Commission, the Board met four times. Details of the Commission's operations and achievements follow.

Commissioner Ross J. Huhn was elected president for this fiscal year, with Commissioner Marilyn Black ser-

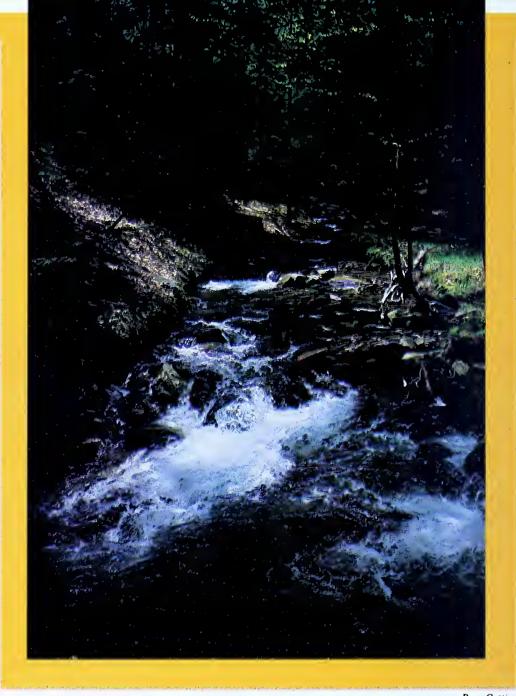
ving as vice president.

A devastating tornado hit north-western Pennsylvania, and its path, sometimes as wide as 1½ miles, extended for over 84 miles. After a skip, it destroyed property and took lives as far east as Williamsport. Commission losses were not great, except to some of our employees' homes. It was another demonstration that nature is stronger than almost all man-made forces together.

During the first part of 1984, precipitation was somewhat lower than usual, but as the year went on, we began to experience drought conditions in the central and eastern parts of the Commonwealth, with drought warnings issued in the Delaware Valley, and conservation practices enforced. It was a 'green' drought in that many lawns were that color and farms were not hurting because what precipitation did fall went root-deep. It was only in the last part of the year, with Hurricane Gloria and then other heavy rains, that water tables were recharged and the drought warnings eased. Excessive rain fell in the western part of the Commonwealth, and much flooding occurred in the southwestern part of the

During the year, we were very active with the Atlantic States Marine Fisheries Commission, which Pennsylvania again chaired. Coming at a time when striped bass were going off the bottom of the chart throughout its entire coastal range, we worked hard to get all 12 coastal states involved in that fishery to come into compliance with a coastwide management plan. This goal was finally achieved in June 1985.

A short tour on a research vessel off the New York/New Jersey coast demonstrated clearly to us that there are technologies available that can protect fisheries at sea for which we have much concern. This experience carried over into our support of restoration efforts in the Chesapeake Bay.



Russ Gettig

In a meeting with all the state fish and wildlife agency directors from the entire country and Washington, we revived interest in the Strategic Great Lakes Fisheries Management Plan.

Perhaps one of the most significant activities of the year that will have farreaching results was a coordinated state and federal law enforcement crackdown in January, which took place simultaneously in 12 states. In Pennsylvania, we cooperated with the Game Commission and the U.S. Fish and



Wildlife Service in halting illegal activities involved in the sale of fish and wildlife. The cooperation of the judiciary branch in giving tough sentences to these offenders, including jail sentences, has not only broken the back of some of the criminal rings, but has sent a message to the outlaws that covert activities are going to continue for the most effective protection of the resources.

The Commission is, as usual, grateful for the support and help of the Pennsylvania General Assembly, the Pennsylvania Federation of Sportsmen's Clubs, the Pennsylvania Wildlife Federation, Trout Unlimited, Bass Anglers Sportsman Society, and other independent organizations that have enabled us to continue our role as an independent administrative agency.

Ralph W. Abele * Executive Director



Office of Information

the public information keeps the public informed of the fishing and boating opportunities within the state. This broad-based public information effort includes Pennsylvania Angler and Boat Pennsylvania magazines, weekly news releases and radio programs, special publications, the Angler Recognition Program, Adopta-Stream, education workshops, exhibits, speaking engagements, and the Pennsylvania League of Angling Youth.

Pennsylvania Angler

The Angler remains one of the most visible Fish Commission voices, keeping Keystone State fishermen well-informed of their sport and the latest news concerning the Commission. Pennsylvania Angler, in its 54th year of publication, continues to be the informational framework upon which fishing in the Keystone State has been built.

Boat Pennsylvania

The circulation of this very popular new Commission magazine has topped 10,000 during the last fiscal year. This achievement surpasses the Commission's expectations of success. Published bimonthly, *Boat Pennsylvania* provides first-hand, authoritative features for the state's motorboaters, canoeists, kayakers, rafters, sailors, and water skiers.

Publications

Of special note were the production and distribution of three major publications. The Commission's popular Trout Fishing in Pennsylvania was revised and updated. In addition, two new publications, Sportfishes of Pennsylvania and Endangered & Threatened Species of Pennsylvania, were also produced.

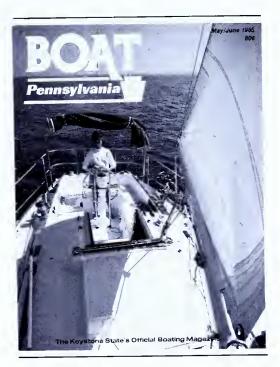
Radio programming

A major thrust of the Commission's information effort is provided by a weekly radio program. Covering a wide variety of fishing, boating, and aquatic resource subjects, the program is furnished to nearly 70 radio stations across the state. The broadcast is written and produced in-house and is aired at varying times by the stations that receive it as a pre-recorded program. Anglers and boaters are urged to contact their local stations for specific broadcast times.

Media Relations

During the past year we have provided the media with news stories and feature articles and photos on all facets of the Commission's operations. And we would be remiss if we did not acknowledge the excellent cooperation we have received from the media in getting our story out to the sportsmen.

One of our most ambitious projects during this fiscal year was a first—not only for Pennsylvania, but for the nation, when the Pennsylvania Fish Commission introduced Fish-for-Free Day to the residents of the Keystone State on September 22, 1984. On that day, residents and nonresidents alike were permitted to fish in any of the Commonwealth's public fishing waters without a fishing license. It was a concerted effort by the entire Commission to introduce more Pennsylvanians to this lifetime family sport.



Over 100 pieces of confiscated tackle were given to state hospitals, geriatric centers, and sportsmen's clubs for use in providing fishing opportunities for children and adults with special needs. An additional 100 pieces were used as "loaner" rods during the Commission's Fish-for-Free Day. Help in rehabilitating this equipment was provided by tackle manufacturers. Deputy waterways conservation officers assisted in cleaning and categorizing equipment. In some instances, interested sportsmen donated their time for repairing damaged rods and reels.



Angler Recognition Program

In 1985, over 1,500 anglers received awards through this program. New state records were established in the striped bass, flathead catfish, coho salmon, and steelhead categories. Twenty-eight anglers were recognized in 1985 for catching fish that were either state records or "biggest fish of the year" in 1984. In addition, conservation service awards and conservation awards were given to adults and youths who had performed activities beneficial to the Commission and the aquatic environment.

Pennsylvania League of Angling Youth (PLAY)

A continued growth was experienced in the Commission's unique and popular PLAY program. In addition to providing a tabloid, activity book, and newsletter for its members, a new dimension was added to the program with the development of PLAY sponsors, adult groups that purchased many memberships for children. Some participating sponsors in 1985 were the Winburne Sportsmen Club in Clearfield County, the Southside Surfcasters in Philadelphia, and the Warminster Township Recreation Department in Bucks County.

Volunteer Information/ Education Corps

Volunteer information representatives in Chester, Clearfield, Cumberland, Delaware, Lackawanna, Lancaster, Lawrence, Lebanon, Luzerne,

Russ Get

Lycoming, Philadelphia, Somerset, and Westmoreland eounties assisted the Commission's public information efforts by distributing educational information, presenting eonservation and information programs, staffing exhibits, stocking fish, and gathering information for Commission publications. Some aeted as site planners and eoordinators for PLAY derbies held throughout Pennsylvania.

Education

Staff members served as members of the Aquatie Resource Education Committee sponsored by the American Fishing Taekle Manufacturers Association and the Sport Fishing Institute to develop curriculum guidelines for aquatie resource education materials to be used in providing states with opportunities to initiate or expand aquatie edueation programs. Assistance was given to the Wild Resource Conservation Fund in developing materials for use in providing the general public with materials about endangered species. The office eontinued to supply audio-visual and written materials for sehools and other organizations, and staff members served as instructors at conservation eamps, outdoor education workshops, and other eonservation-related programs.

Bureau of Waterways

The promulgation of boating laws and the enforcement of fishing and boating laws, the registration of boats, the development of a comprehensive boating safety education program, and the promotion of reereational boating is the charge of the Bureau of Waterways. The bureau is structured into one division and two sections. The Law Enforcement Division is the operational arm of the Commission. It provides direct contact with the state's sportsmen through a comprehensive public relations and enforcement program. The Administration and Boat Registration Section sees to the administrative needs of the bureau in areas such as purchasing, personnel, and the development of boating laws and regulations. It also coordinates the registration of boats, the Marine Fuel Tax Refund Program, and the Federal Boating Safety Grant Program. The Boating Education Section develops and implements boating education programs for the Commission, other state and federal ageneies, and the general public. Coordination of these functions is the responsibility of the Bureau of Waterways assistant executive director.

Administration

In 1985, three new members to the Boating Advisory Board were appointed. David Coe, State College; Helen Lange, Sharpsville; and Edward Rogowski, Holland; were appointed by Governor Thornburgh to replace members whose terms had expired. Clayton Buehanan was reappointed to another 5-year term.

The board met twice to consider new and revised boating regulations. Among the major changes were amendments to Chapter 101, requiring that vessels earrying more than six passengers for hire be inspected every three years by a marine surveyor, and to Chapter 99, deleting the provision requiring the removal of the propeller from a motor in excess of 10 hp on lakes with 10 hp limits. Other minor changes were also discussed and disposed of.

The Fish Commission again this year received an allocation from the Biaggi Fund for its boating safety program. This fund, administered by the U.S. Coast Guard, has been instrumental in increasing boating safety efforts of the Commission. Funds provided through this grant program have been used to increase the number of boat patrols conducted by field officers, hire a boating education specialist to direct the implementation of the water safety program in the public school system, and begin to organize and catalog aids to navigation in Commonwealth waters.

Boat Registration Section

After correcting difficulties that surfaced during its first year of operation under a new computer system, the section experienced a successful year. Registrations continued to come in record numbers, exceeding 228,000 by year's end. All renewal applications were mailed in early January, and the early response by boat owners in returning



applications ensured that most Pennsylvania boaters received their new registrations in plenty of time for the boating season. Over 8,000 new boats were registered, and 14,000 people indicated that they were first-time boat owners.

Boating Safety Education Section

This section continues to provide better service for the increased demand for boating safety information and education programs.

This year, the Commission's boating and water safety eourse was taught in 18 sehool districts throughout the Commonwealth. The program continues to expand, including Seout troops, youth conservation groups, and boating clubs. More than 750 certificates were issued to youths between the ages of 13 and 18. Currently, 99 people are certified to teach this course.

The two boating safety information vans, equipped with literature on safe boating practices and accident prevention, visited 53 municipal, county, and state parks between May and September. In addition to offering these safety publications to the park visitors, practical demonstrations on boating safety were presented.

The water reseue eourse, developed to meet a serious need for additional training for fire and reseue personnel,



continues to expand. In addition to adding more certified instructors in the first two phases of the program, the final phase was developed. This part of the course will be implemented in the spring of 1986.

The Boating Safety Education Scction also offered as assortment of training programs to the waterways conservation officers, their deputies, and personnel from the Game Commission, Bureau of State Parks, U.S. Army Corps of Engineers, and other state and national agencies.

Boating accidents

There were 12 boating accident fatalities in 1985, compared to 23 deaths in 1984. Of these 12 accidents, six involved the use of non-powered boats. This percentage is lower than in previous years and is probably due to the milder-than-usual climatic conditions in the early part of last year. Capsizing continues to be the most frequent type of fatal accident. Lack or non-use of PFDs was a contributing factor in 11 of these fatalities. Alcohol involvement was present in nine of these accidents.



Law enforcement activities are varied. WCO Larry Baker (Mifflin and Juniata counties) assists a camper at a fishing event for children.

Law Enforcement Division

Division personnel continue to be involved in a variety of Commission programs. The enforcement of fishing and boating laws and regulations is the primary responsibility of waterways conscription officers (WCO) and deputy waterways conservation officers (DWCO). The officers do, however, perform many other duties, including stocking fish; manning displays at fairs and malls; presenting fishing and boating safety schools; reviewing mine drainage, channel change, and drawdown applications; and installing navigational aids. Emphasis continues on water quality and boating safcty. WCOs and deputies continue to investigate more reported water pollutions and stream disturbances than ever.

Enforcement of the amended law, "Boating under the Influence of Alcohol or a Controlled Substance (drugs), including Homicide by Watercraft," became a challenge. The first homicide-by-watercraft charges were filed in Dauphin County Court, the result of a boating accident that occurred in the Susquehanna River, Goldsboro Pool. The case is awaiting formal court action.

Several persons were also charged with boating under the influence of alcohol as a result of other accidents, or they were observed operating a boat in a reckless or negligent manner.

Special training has been provided for division officers to aid in the detection of alcohol use by boaters. Training continues for deputics in basic law enforcement courses, water rescue, and in other areas as part of the Commission's mandatory training program.

WCOs in a number of counties assisted the Game Commission and U.S. Fish and Wildlife Service in a special two-year undercover operation. This resulted in a number of individuals being charged with Fish and Boat Code violations and other criminal charges. These stemmed from the theft and sale of fish from cooperative nurseries and private hatcherics.

Law enforcement activities included the prosecution of 8,077 persons for fishing violations and 3,481 persons for boating violations. Some 18,028 warnings were issued for fishing infractions, and 14,375 were issued for boating violations. A total of 538 pollutions were investigated, with 457 successfully closed by prosecution, settlement agreement, or voluntary contributions. Division officers were extensively involved in public relations functions during the year. Of special note was the manning of 42 Fish-for-Free Day sites, where many new anglers were assisted and taught how to fish, fillet fish, and cook their catches. Officers set up and manned two major fishing/boating "expo" displays in the northeast and southeast areas of the state.

Officers continually put their water rescue, first aid, and CPR training to good use, and have come to the aid of many individuals in all areas of Pennsylvania.

The untimely death of WCO Paul Sowers and the retirements of supervisors Owens and Paulakovich, and WCO Ohlsen have created vacancies in some field districts. Various promotions were also made as a result of the retirements. Frank Schilling was promoted to supervisor, Southeentral Region; J. Gary Moore to assistant supervisor, Southeentral Region; Robert Perry to supervisor, Southeast; and G.W. Frank Kann to assistant supervisor, Northeast Region.

Bureau of Fisheries and Engineering

he Bureau of Fisheries and Engineering is responsible for managing all fisheries programs and all engineering, construction, and maintenance activities for both the fisheries and boating programs. Bureau staff is also involved in a number of activities that plan Commission programs and coordinate efforts with other Commission activities, government agencies, and private organizations.



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Division of Engineering and Architecture

Division of Construction and Maintenance

The work of the divisions of Engineering and Architecture and Construction and Maintenance is closely related and therefore described as a joint report. The charge of the Commission's development and maintenance program is to encourage and provide for safe public use of recreational waters by the development and maintenance of access areas, lakes, hatcheries, and required administrative facilities. Related activities include participation in interagency efforts to improve and restore fish migration and water quality, and furnishing engineering and related technical services to other divisions of the Fish Commission, local governments, and sportsmen.

The access area system consists of over 250 developed properties throughout the state. The following are the most notable projects undertaken dur-

ing the fiscal year:

• Halifax Access, Susquehanna River, Dauphin County. Completed construction of a railroad crossing, bituminous paved access road and parking lot, and precast concrete plank surfaced boat

launching ramp.

- Frankford Arsenal Access, Delaware River, Philadelphia County. Under a 5year plan starting in 1982, construction completed through this fiscal year includes bituminous paved 179 cartrailer parking lot and access roads, concrete surfaced 6-lane boat launching ramp, piling for seasonally installed floating docks, entranceway gating and peripheral fencing, and subsurface storm drainage. Landscaping was begun as a Pennsylvania Conservation Corps (PCC) project.
- Kyle Lake Access, Jefferson County. A PCC project, construction of earthfilled fishing pier, paved access road and parking areas, new boat dock and launching ramp, spillway and control tower repairs, and fish habitat improve-

ment structures.

• Deer Creek Access, Allegheny River, Allegheny County. Engineering and prerequisite archaeological investigation for proposed major improvement of parking, docking, and launching facilities.

 Montgomery Access, West Branch Susquehanna River, Lycoming County. Completed construction of bituminous paved access road and parking lot, and precast concrete plank surfaced boat launching

- Muncy Access, West Branch Susquehanna River, Lycoming County. Construction of bituminous paved access road and parking lot, and a precast concrete plank surfaced boat launching ramp.
- Conneaut Lake Access, Crawford County. Installation of aluminum sheet pile retaining wall for shore protection and maintenance dredging of approach to boat ramp.
- Cowanshannock Access Site, Allegheny River, Armstrong County and Penn Nursery Access Site, W. Branch Susquehanna River, Northumberland County. Preconstruction engineering and permit process completed.

• New Brighton Access, Beaver River, Beaver County. Maintenance dredging

of approach to boat ramp.

• Mahoning Lake Access, Armstrong County. Construction of crushed stone surfaced access road and parking lot.

- Walnut Creek Access, Lake Erie, Erie County. Performed major improvement to building used by Law Enforcement Division with PCC personnel, and performed maintenance dredging of the boat channel.
- Access Technical Assistance. Engineering design and information for the development of public use facilities by the cities of Philadelphia, Erie, and Lock Haven.

Following is a summary of some of the more significant projects performed for the Commission's hatchery system.

- Bellefonte Fish Culture Station, Centre County. Installation of standby diesel generator to power pumps during electrical outages and contruction of 7-bay vehicle storage building and rearing troughs.
- Benner Spring Fish Culture Station, Centre County. Installation of multipurpose building heating, ventilating and plumbing systems, and construction of 8-bay vehicle storage building.

• Corry/Union City Fish Culture Stations, Erie County. Repaired lightningdamaged power lines.

• Fairview Fish Culture Station, Erie County. Installation of raceway covering utilizing PCC personnel, construction of 3-bay vehicle storage building and renovation of multi-purpose building roof.

- Huntsdale Fish Culture Station, Cumberland County. Construction of 9bay vehicle storage building and renovation of the "old fire house" building to serve as regional law enforcement headquarters.
- Linesville Fish Culture Station, Crawford County. Rehabilitation of wells Nos. 2 and 3 and construction of 2-bay vehicle storage building.

• Pleasant Mount Fish Culture Station, Wayne County. Construction of a new public entrance and structural repairs to the main hatchhouse.

• Reynoldsdale Fish Culture Station, Bedford County. Installation of standby diesel generator to power pumps for use during electrical outages.

 Tionesta Fish Culture Station, Forest County. Reconditioning and rehabilita-

tion of pump and well No. 1.

The maintenance of the Commission's statewide system of public use facilities, along with various operational units, is performed by five regionally headquartered maintenance crews. This year, as in the past, they also assisted in the construction of new access facilities, repairing hatchery ponds, stocking trout, upkeep of hatchery and regional law enforcement buildings and grounds, lake weed control, and drawdown of lakes for fish management purposes.

In compliance with the National Dam Safety Act, the Division continued its program of inspecting the condition of dams for 29 man-made lakes it controls. The division also completed feasibility studies and began securing permits and approvals to breech the dams permanently for two former

impoundments.

Under an ongoing program to restore fish migration, the division cooperated in an engineering study to fish ladder designs with the Philadelphia Electric Company, owner of the Schuylkill River, Norristown Dam. The program also includes fishway design work for dams in the Lehigh and Susquehanna rivers.

Division of Fisheries

The Division of Fisheries was involved in a wide variety of activities directed at protecting aquatic resources and habitat and at providing better fishing. These various activities were carried out by the five sections of the division. All sections except Warmwater-Coolwater propagation are headquartered at Bellefonte.

Fisheries Research Section

The Fisheries Research Section is staffed by a small group of professionals with differing areas of technical expertise. The section is composed of four distinct work units—Fish Culture Research, Water Quality, Lake Erie Research, and Fish Health Management—which provide essential support and services to other sections and divisions of the Commission and to other agencies.

Examples of the areas of activity by the units include the Susquehanna Anadromous Fish Restoration effort; development and evaluation of rearing techniques for coolwater fishes; the Glendale Lake Esocid Project; monitoring of effluent and permit coordination for fish culture stations; analysis of water samples for chemical and bacteriological factors; assessment of fish populations, lamprey incidence, and water quality in Lake Erie; genetics studies to improve Fish Commission broodstock; and provision of diagnostic and fish health services to all Commission fish culture stations.

Fisheries Management Section

The Fisheries Management Section is comprised of field personnel and a central office staff. The field personnel, seven area fisheries managers and their support staffs, are assigned to specific watershed areas. The Central office staff includes clerical support and technical specialists including a rare and endangered species coordinator, a coldwater unit leader, and a warmwater unit leader. The role of each specialty group is to coordinate management of all fisheries (including reptiles and amphibians) to conserve, protect, and enhance fishery resources and provide optimum fishing.

Most of the fisheries management section's activities were included in two federally funded (Dingell-Johnson) projects—the Fisheries Management Project and the Technical Guidance Project. The Fisheries Management Project is directed at collection of information needed to manage fisheries in the Commonwealth. Field surveys were conducted this fiscal year on more than 120 streams and 30 lakes. Special projects included the Pymatuning Reservoir Walleye Study, monitoring of Letort and Falling Spring trout populations, monitoring of wild trout in

PENNSYLVANIA FISH COMMISSION **Division of Fisheries**

FISH STOCKING STATISTICS — 1984-85 FISCAL YEAR STATE-FEDERAL STOCKING PROGRAM

Coldwater Fisheries

	Areas Stocked	Miles Stocked	Acres Stocked
Number of streams stocked with adult trout Miles of streams stocked with adult trout	812	4,912	
Acres of streams stocked with adult trout Number of lakes stocked with adult trout	117	·	22,323
Acres of lakes stocked with adult trout	• • •		10,880
Totals	929	4,912	33,203
Number of coldwater fish (trout and salmon) stock	ed:		
Fry0-			

Fry	0-
Fingerling	- 4,932,520
Adult _	- 5,577,355
Total	10,509,875

Warmwater Fisheries

Number of warmwater areas stocked	122		
Miles of warmwater streams stocked		133	
Miles of warmwater rivers stocked		832	
Acres of warmwater ponds and lakes stocked			82,486
Totals			82,486

Number of warmwater fish stocked:

Fry	- 4	40,136,160
Fingerling	_	1,464,896
Adult	_	2,672
Total		41,603,728

GRAND TOTAL OF ALL	SPECIES STO	CKED	. 52,113,603
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specially regulated waters, shad restoration, Cross Creek Lake special regulations, and informational programs on reptiles, amphibians, and endangered species. The rare and endangered species coordinator also processed scientific collector's permits and snake hunting permits.

Fisheries Environmental Services Section

The Fisheries Environmental Services Section serves as the Commission contact and coordination point with other state and federal conservation agencies. This section also handles review of various permit applications, administers the fish habitat improvement program, and conducts surveys of waters threatened by possible pollution and actually polluted as the result of mineral extraction or other activities on the watershed.

No. of

No. of

No. of

Staff reviewed and commented on over 3,000 permit applications or project proposals, attended 111 meetings, and made 112 field investigations relative to permit application and project proposals. Other activities included design of fish habitat projects and supervision and inspection of fish habitat improvements as well as extensive stream surveys related to surface mining and oil and gas well pollution of streams.

Warmwater-Coolwater Fish Propagation Section

This section is responsible for production of all warmwater fishes such as bass, all coolwater fishes such as walleye, northern pike, and muskellunge as well

PENNSYLVANIA FISH COMMISSION Division of Fisheries

RECORD OF FISH STOCKED FISCAL YEAR JULY 1, 1984 TO JUNE 30, 1985 STATE-FEDERAL STOCKING PROGRAM

			rou	•			
SPECIES	FRY Number	FINGEI Number		ADI Number		GRAND NUMBER	
Brook Trout		658,000	8,476	1,122,763	499,883	1,780,763	508,35
Brown Trout		1,481,373	22,738	1,982,843	895,706	3,464,216	918,44
Rainbow Trout		498,500	21,517	2,316,814	1,049,599	2,815,314	1,071,11
Palomino Rbw							
Trout		-		39,795	26,162	39,795	26,16
Lake Trout		43,532	2,111	140	280	43,672	2,39
Steelhead Trout		353,000	13,034	115,000	10,389	468,000	23,42
TOTAL TROUT		3,034,405	67,876	5,577,355	2,482,019	8,611,760	2,549,69
		S	ALM	NC			
Atlantic Salmon		5,750	1,030			5,750	1,03
Chinook Salmon		686,240	6,336			686,240	6,33
Coho Salmon	-	1,181,125	84,030			1,181,125	84,03
Kokanee							
Salmon		25,000	800			25,000	80
TOTAL SALMON	_	1,898,115	92,196		******	1,898,115	92,19
		G/	MEF	ISH			
American Shad	9,836,160	31,500	81			9,867,660	8
Amur Pike							
(Hybrid)		1,750	304			1,750	30
Chain Pickerel	_	1,200	372			1,200	37
Largemouth							
Bass		43,250	1,056		344	43,422	1,40
Muskellunge (P)	50,000	83,950	4,945			133,950	4,94
Muskellunge (T)		124,738	15,300			124,738	15,30
Northern Pike	washen.	23,250	2,056			23,250	2,05
Saugeye Smallmouth		18,330	125			18,330	12
Bass	_	4,400	56	_	_	4,400	5
Striped Bass		168,001	807			168,001	80
Striped Bass x		· · · · · · · · · · · · · · · · · · ·		,	· · · · · · · · · · · · · · · · · · ·		
White Bass	_	75,700	849	2,500	3,750	78,200	4,59
Walleye	29,250,000	529,722	4,900			29,779,722	4,90
TOTAL Gamefish	39,136,160	1,105,791	30,851	2,672	4,094	40,244,623	34,94
			ANE	en			0.0/20
Black Crappie		18,000	ANFI	<u>_</u>	_	18,000	32
Brown Bullhead	_	5,000	250			5,000	25
Channel Catfish		320,100	2,859		_	320,100	2,85
White Bass		3,400	59		_	3,400	5
White Catfish	_	7,605	39			7,605	3
Yellow Perch	1,000,000			·	_	1,005,000	10
TOTAL PANFISH	1,000,000	359,105	3,636			1,359,105	3,63
	.,555,000					1,000,100	3,30
TOTAL FORAGE		ror	RAGE	гіэп			
FISH							_
GRANO TOTAL	40,136,160	6,397,416		5,580,027	2,486,113	52,113,603	2,680,67

as salmon, steelhead, and lake trout. Section headquarters is located at Linesville, Pennsylvania. Fish culture stations contributing to the warmwater-coolwater production for this fiscal year were Linesville, Tionesta, Benner Spring, Union City, Huntsdale, and Pleasant Mount. Stations contributing to the salmon-steelhead-lake trout effort were Fairview, Linesville, and Tionesta.

Trout Propagation Section

The Trout Propagation Section ineludes all stations involved in trout production and the Cooperative Nursery Braneh. Coordination and processing of agency-wide fish food purchases is also administered within the Trout Propagation Section. Fish culture stations involved in fiscal year production of 5,266,843 adult trout—2,389,644 pounds—included Bellefonte, Benner Spring, Big Spring, Corry, Huntsdale, Oswayo, Pleasant Mount, Pleasant Gap, and Reynoldsdale.

Cooperative Nursery Branch

The Cooperative Nursery Braneh effort includes 155 organizations sponsoring 179 coldwater, two coolwater, and seven warmwater fish rearing units. Clubs participating in the cooperative nursery program released 1,104,430 catchable-size trout into public waters during the fiseal year. This is the second year ecooperative nurseries have released over a million trout. In addition to trout, nurseries released 7,704 largemouth bass and over 672,000 walleye fry.

Bureau of Administrative Services

he Bureau of Administrative Services provides fiscal planning and budget preparation, personnel and payroll, training, issuance of special permits and licenses, federal aid coordination, issuance of fishing licenses, automotive fleet services and record keeping, purchasing and procurement of goods and services, land and water leasing and acquisition, duplicating and mailroom services, messenger service, inventory record keep-

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ing, warehousing, and other functions required in the day-to-day operations of the Pennsylvania Fish Commission.

Personnel Section

The personnel section develops and implements programs for Fish Commission employees, including recruitment and placement, classification and pay, employee benefits, personnel transactions, affirmative action, and labor relations.

The following are some highlights of the activities of the Personnel Section during the 1984-85 fiscal year:

• Labor relations. The Personnel Section participated in strike preparations, contract negotiations, and the ultimate settlement of a new 3-year union contract for employees covered by the American Federation of State, County and Municipal Employees agreement. Problems caused by the Fair Labor Standards Act in the areas of overtime pay and compensatory time are the subject of continuing talks between the union and management.

• Transactions. Some 2,521 personnel transactions were processed during the

1984-85 fiscal year.



• Leave. Fish Commission employees continue to use less sick leave than employees in any other state agency.

Real Estate Section

Due to continuing land acquisition budget constraints, the Real Estate Section has continued to seek land for access to public waters through cooperative municipal agreements, interagency transfers, and donations of land.

The following are some of the 1984-85 fiscal year activities of the Real Es-

tate Section:

• Fee simple acquisitions. Huntsdale Fish Culture Station, Cumberland County (additional land); Spring Creek, Centre County (fishing waters); Godfrey Run, Erie County (coho fish culture); Port Providence Access, Montgomery

County (access to Schuylkill River).

• Access leases. Bloomsburg Access, Columbia County (access to Susquehanna River, North Branch); Great Bend Borough Access, Susquehanna County (access to Susquehanna River, North Branch); Cochranton Access, Crawford County (access to French Creek); East Coventry Township Access, Chester County (access to Schuylkill River); South Pottstown Access, Chester County (access to Schuylkill River); Marietta Access, Lancaster County (access to Susquehanna River); Lake LeBoeuf, Erie County (access to Lake LeBoeuf).

• Properties under option. One in Fayette County and one in Beaver County.

• Miscellaneous agreements finalized. 24.

Fishing License Section

This section appoints and supervises 1,800 license issuing agents, which include private businesses and county treasurers in Pennsylvania, Ohio, and New Jersey. Monthly reports are received and audited with revenue deposited in the Fish Fund by the state treasurer.

Fishing licenses sold in 1984-85 included:

 Resident
 946,995

 Non-resident
 50,774

 Senior resident
 50,096

 Tourist
 14,455

 Lifetime resident
 12,926

 Free
 2,017

TOTAL: $\frac{2,017}{1,077,263}$

Miscellaneous Licenses and Permits Section

The Miscellaneous Licenses and Permits Section reviewed and issued the following:

7110 W 1116.	
Transportation permits	9 7
Live bait dealer's licenses	882
Live fish dealer's licenses	18
Artificial propagating	
licenses	144
Regulated fishing lake	
licenses	226
Net permits	208
Scientific collectors permits	161
Drawdown permits	119
Dynamite permits	14
Mine drainage	414

Purchasing Section

The Purchasing Section is reponsible for the procurement of supplies, materials, and services for the Harrisburg and field offices of the Pennsylvania Fish Commission. The office is working on plans to modernize and computerize many of its functions, which include maintaining vendor lists, writing specifications for commodities and services, and keeping purchase and inventory records.

We have been participating in a pilot project that raised the "buy-local" dollar limit to \$5,000. This pilot program has now been implemented into the standard purchasing procedures of the

Fish Commission.

The formulation of budget projections and performance measurements standards is a continuing goal of the Purchasing Section.

Data processing

This was the second full year of use of the computer in Harrisburg and Bellefonte. The system in Harrisburg has enabled us for the first time to ship over one million fishing licenses without any overtime. This year, faced with the increasing number of boat registrations, the Commission has been able to ward off making additional purchases and hiring extra personnel with the use of the computer system. Over 228,000 boat registrations have been placed on our system and now are processed inhouse.

Additional areas in which the computer system is used include general correspondence, fish stocking schedules, records, research data, field citations, purchasing, automotive records, permits, real estate records, and reports.

Sand and gravel royalties

During fiscal year 1984-85, the Pennsylvania Fish Commission received \$233,431 in royalty payments from dredging companies operating on Commonwealth waters. This amount represents an increase of \$3,316 in receipts collected in fiscal year 1983-84.

Since the passage of Act 225, approved July 31, 1970, \$3,673,401 has been received in revenue from this category of income by the Fish Commission.

Federal Aid Section

The section on federal aid coordination prepared and submitted formal documentation for federal assistance on two new projects* and five new project segments to existing projects** during the fiscal year. Total project reimbursements, from all federal programs, were \$1,839,187.55, and were distributed as follows:

Fish Fund \$1,177,999.57 Boat Fund 661,187.98 \$1.839,187.55

New project/segment submissions in FY 1984-85 were down \$595,153.61 from those of FY 1983-84. Principally, this was due to the total loss of Anadromous Fish Act funding for the Commission's Lake Eric Salmonid Program, the costs of which has been federally shared since its inception in 1968. Since the loss of those federal funds, the Commission has been forced to finance the program in its entirety. A replacement Lake Erie Salmonid Program proiect has been submitted and approved, requesting utilization of federal assistance from the expanded Dingell-Johnson Act.

Comptrollers Report

The following balance sheets and statements of unreserved fund balance for the Fish and Boat funds were prepared in accordance with Generally Accepted Accounting Principles (GAAP).

• Fish Fund

Total revenue deposited in the Fish Fund during the 1984-85 fiscal year was \$16,408,125, an increase of \$536,782 over the previous year's cash receipts. An additional \$875,712 revenue was accrued as a receivable on June 30, 1985, for an overall \$1,412,494, or 9 percent, increase in revenue from last

CLASSIFICATION OF EXPENDITURES AND COMMITMENTS
(Incurred July 1, 1984, to June 30, 1985, from Current Appropriations)

Combined

Funds

	Charged	_	Expenditures
	To FISH	to BOAT	and
PERSONNEL SERVICES:	FUND		Commitments
Salaries and Wages	\$7,952,716		\$9,491,597
Employee Benefits — State Share	3,148,440	509,317	3,657,757
PERSONNEL SERVICES TOTAL	\$11,101,156	\$2,048,198	\$13,149,354
OPERATIONAL EXPENSES:			
Fish Food	\$ 900,118	\$ -0-	\$ 900,118
Vehicle Maintenance — Gasoline,			
Oil, Repairs, etc	466,505	249,538	
Printing and Advertising	482,471	194,265	
Utilities (Electricity, Heat, Water)	590,452	43,030	633,482
Payment to Other State Agencies			
for Services Rendered	439,478	120,785	560,263
Maintenance Materials and Supplies			
for Construction, Repairs and Upkeep	307,715	96,723	
Postage	156,298	173,058	
Telephone Expenses	164,788		
Travel Expenses	192,709	50,602	243,311
Maintenance and Rental of Office,			
Copying, Tabulating and			
EDP Equipment	100,898	92,292	193,190
Contracted Maintenance Services of			
PFC Buildings and Grounds	108,644	45,413	154,057
Rental of Buildings for Office			
and Storage	69,949	58,339	128,288
Contracted Specialized Services			
(Legal, Consulting, etc.)	80,288	41,733	122,021
Purchase of Uniforms, Clothing,			
Footwear	64,148	40,21	
Special Conference Expenses	63,489	22,742	86,231
Laboratory Supplies, Drugs and			
Chemicals			
Insurance — Liability, Surety, Fidelity	38,331	14,93	53,263
Other Supplies (Office, Educational,			
etc.) and Services	217,643	80,26	297,907
OPERATIONAL EXPENSES TOTAL	\$ 4,504,386	\$1,421,91	\$ 5,926,304



FIXED ASSETS (Capital Improvement	nts):		
Purchase of Automobiles, Trucks, and			
Watercraft	\$ 334,667	\$ 371,309	\$ 705,976
Access Area Development and			
Improvements to Lakes and Streams	235,891	170,686	406,577
Building Improvements to New and			
Existing Structures	173,368	130,570	303,938
Machinery and Equipment	225,727	25,665	251,392
Radio Equipment Purchases	97,593	111,307	208,900
Purchases of EDP Equipment	77,791	38,419	116,210
Office Equipment, Furniture and			
Furnishings	43,476	55,833	99,309
Consideration Costs of Land, Lakes and			
Streams Acquired	41,000		41,000
FIXED ASSETS TOTAL	\$ 1,229,513	\$ 903,789	\$2,133,302
GRANTS AND SUBSIDIES	\$ 17,598	\$ 1,095	\$ 18,693
Pennsylvania Fish Commission			
General Operations Total	\$16,852,653	\$4,375,000	\$21,227,653
Department of General Services —			
General State Authority Rentals	62,133	1,985	64,118
Treasury Department — Replacement			
Checks	947	0_	947
TOTAL EXPENDITURES AND			
COMMITMENTS	\$16,915,733	\$4,376,985	\$21,292,718

Documentation was submitted during the year on the following existing and new projects:

Eigh 9 Wildlife Destaration Act (D. 1)		Anticipated Reimburse- ment
Fish & Wildlife Restoration Act (D-J) **D-J Maintenance (F-30-D-20)	\$ 350,000	\$ 262,500
**Fisheries Management Project (F-57-R-8) **Fisheries Technical Guidance	1,017,668	763,251
F-61-T-6)	232,000	174,000
0	\$1,599,668	\$1,199,751
Commercial Fish Act (NMFS) *Yellow Perch Assessment-Lake Erie	\$ 100,472	\$ 75,354
	\$ 100,472	\$ 75,354
Surface Mining Control & Reclamation Act of 1977 **Small Operator's		
Assistance Program	\$ 25,000	\$ 25,000
Fishery Conservation & Management Act of 1976 *Mid-Atlantic Fishery	\$ 25,000	\$ 25,000
Management Council	\$ 4,000	\$ 4,000
U.S. Department of Transportation	\$ 4,000	\$ 4,000
(U.S. Coast Guard Grant — Boating Safety) *Boating Safety Program		
(federal fiscal year 1985) — 15.01.42	\$ 313,334	\$ 313,334
	\$ 313,334	\$ 313,334
GRAND TOTALS	\$2,042,474	\$1,617,439

fiscal year. Resident and non-resident fishing license revenue increased approximately \$506,000, federal aid reimbursements increased \$441,000 and interest income on short-term investments increased \$108,000. Various revenue categories such as Fish Law fines, miscellaneous publications, and Van Dyke Research Station operational cost reimbursements accounted for the remainder of this increase.

Expenditures and commitments totaled \$16,871,632 for the 1984-85 fiscal year, an increase of approximately \$907,000, or 6 percent, over the previous fiscal year-end total. Fish Commission personnel salaries, wages, and state share of employee benefits increased approximately \$915,000, or 9 percent, the direct impact of previously negotiated collective bargaining agreements. Operational expenses overall increased approximately \$200,000, or 5 percent, the result of aggregate increases in numerous cost categories. Fixed assets and capital improvement decreased approximately \$185,000, or 13 percent, primarily the result of fewer automobile, truck, and watercraft purchases.

Unused current appropriation monies lapsed at year-end closing were \$301,265 with an additional \$7,776 lapsed from prior year appropriations that were encumbered on June 30, 1984.

The unreserved/undesignated fund balance of the Fish Fund on June 30, 1985, was \$9,524,388, an increase of \$419,981 from the previous fiscal year-end.

Boat Fund

Total revenue received during the 1984-85 fiscal year was \$3,780,808, an increase of \$294,370 over the previous year's cash receipts. An additional \$669,535 revenue was accrued as a receivable on June 30, 1985, for an overall \$963,905, or 28 percent, increase in revenue from last fiscal year. The liquid fuels tax reimbursements from the Motor License and Liquid Fuels Tax Funds increased \$452,000. Federal aid reimbursements increased \$288,000, the direct result of receipt of two federal fiscal year reimbursements from the U.S. Coast Guard Grant for Boating Safety received in the same year. Interest on short-term securities increased \$99,000, motorboat registration fee revenue increased \$69,000, and subscriptions for Boat Pennsylvania magazine totaled \$56,000 for its first full year's existence.





Expenditures and commitments totaled \$4,376,985 for fiscal year 1984-85, a \$370,000, or 9 percent, increase over the June 30, 1984, total. Personnel services increased approximately \$173,000, or 9 percent; operational expenses increased approximately \$175,000, or 14 percent; and fixed assets and capital improvements increased approximately \$22,000.

Unused current appropriation monies lapsed at year-end closing were \$321,015 with an additional \$590,000 lapsed from prior appropriations that were encumbered on June 30, 1984.

The unreserved/undesignated fund balance of the Boat Fund on June 30, 1985, was \$5,238,184, an increase of \$663,358 from the previous fiscal yearend total.

FISH FUND - EXPENDITURES & COMMITMENTS BY DIVISION Incurred July 1, 1984, to June 30, 1985

Executive Office \$ 149,928 Comptroller 215,200 Bureau of Administrative Services 1,366,268 Office of Information 972,855 Legal Services 20,504 Division of Fisheries: 442,321 Propagation Sections 6,399,196 Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: 32,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133 Treasury Department — Replacement Checks 947
Comptroller 215,200 Bureau of Administrative Services 1,366,268 Office of Information 972,855 Legal Services 20,504 Division of Fisheries: 40,504 Administration Section 142,321 Propagation Sections 6,399,196 Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: 236,004 Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Bureau of Administrative Services 1,366,268 Office of Information 972,855 Legal Services 20,504 Division of Fisheries: 40,505 Administration Section 142,321 Propagation Sections 6,399,196 Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Office of Information 972,855 Legal Services 20,504 Division of Fisheries: 30,504 Administration Section 142,321 Propagation Sections 6,399,196 Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Legal Services 20,504 Division of Fisheries: 142,321 Administration Sections 6,399,196 Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: 82,903 Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Division of Fisheries: Administration Section
Administration Section 142,321 Propagation Sections 6,399,196 Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: 329,004 Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Propagation Sections 6,399,196 Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Fisheries Research 528,769 Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Fisheries Management 946,772 Fisheries Environmental Services 236,004 Division of Engineering: Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Fisheries Environmental Services 236,004 Division of Engineering: Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Division of Engineering: Administration
Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Administration 82,903 Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Architectural/Engineering Section 490,935 Construction Section 1,226,154 Property Maintenance Branch 688,542 Bureau of Fisheries & Engineering Administration 402,505 Law Enforcement Division 2,983,797 Fish Fund General Operations Total \$16,852,653 Department of General Services — General State Authority Rentals 62,133
Construction Section
Property Maintenance Branch
Bureau of Fisheries & Engineering Administration
Law Enforcement Division
Fish Fund General Operations Total
Department of General Services — General State Authority Rentals 62,133
Department of General Services — General State Authority Rentals 62,133
Department of General Services — General State Authority Rentals 62,133
Total Expenditures and Commitments
Tutal Experienter es and commitments

FISH FUND REVENUE Deposited July 1, 1984, to June 30, 1985

LICENSES AND FEES:

Resident Fishing Licenses — Regular\$11,306,860)		
Lifetime Fishing Licenses — Senior Residents			
Resident Fishing Licenses — Senior 98,486			
Non-Resident Fishing Licenses			
Tourist Fishing Licenses 210,756	5		
Miscellaneous Permits and Fees 14,096			
Fee-Fishing Lake Licenses			
Pennsylvania League of Angling Youth Fees 10,258	3		
Commercial Hatchery Licenses)		
H. R. Stackhouse Facilities User Fees 4,715			
Scientific Collectors' Permits 3,020)		
Lake Erie Licenses 2,115			
Technical Service Fees —			
Non-Government Organizations and Individuals 93			
Total Licenses and Fees\$12,802,056	ŝ		
NES AND PENALTIES:			

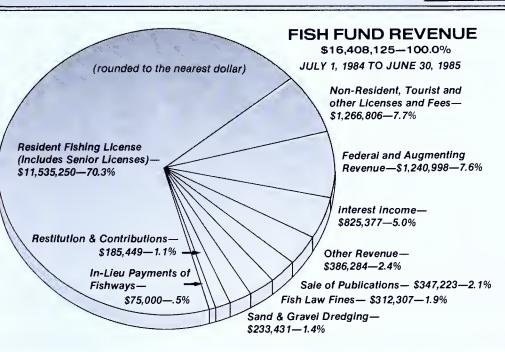
Fish Law Fines\$	312,307

MISCELLANEOUS REVENUE:

Interest on Securities and Deposits \$825,377 Sale of Pennsylvania Angler		
Income from Sand and Gravel Dredging Operations	Interest on Securities and Deposits \$	825,377
Income from Sand and Gravel Dredging Operations	Sale of Pennsylvania Angler	261,047
Restitutions for Fish Killed and Contributions for Restocking Streams . 185,449 Royalty Payments from Gas and Oil Leases	Income from Sand and Gravel Dredging Operations	233,431
Royalty Payments from Gas and Oil Leases	Restitutions for Fish Killed and Contributions for Restocking Streams.	185,449
Reimbursement of Van Dyke Shad Station Operational Costs		
Miscellaneous	Reimbursement of Van Dyke Shad Station Operational Costs	111,105
Sale of Publications		
In-Lieu-of-Payments for Fishways	Sale of Publications	. 86,176
Sale of Recreational Fishing Promotional Items 19,556		
	Sale of Recreational Fishing Promotional Items	. 19,556

Total Revenue Subject to Executive Authorizations \$15,167,127
AUGMENTATIONS:

Pennsylvania Conservation Corps Program Reimbursements 19,381





In fiscal year 1984-1985, more than 1 million licenses were sold. In addition, the Fish Commission stocked more than 52.1 million coldwater and warmwater fish.

PENNSYLVANIA FISH COMMISSION FISH FUND STATEMENT OF UNRESERVED FUND BALANCE FOR THE FISCAL YEAR ENDED JUNE 30, 1985

Fund Balance — Unreserved/Undesignated, June 30, 1984 \$9,104,407

Add: Revenues

Actual Cash Receipts, July 1, 1984, to

June 30, 1985 \$16,408,125

Cash in Transit 113,781

Receivables as of June 30, 1985:

Interest on Short-Term Investments
Due from Other Commonwealth Funds
Accounts Receivable

135,858
57,429
40,038

Grants Receivable—Federal Government 528,606 17,283,837

Lapses from Prior Year Appropriations 7,776

Beginning Fund Balance and Additions

\$26,396,020

Deduct: Expenditures and Commitments

Expenditures and Commitments

as of June 30, 1985,

from Current Appropriations \$16,915,733

Accrued Expenditures, July 1, 1985,

thru August 31, 1985, for Goods and

Services delivered prior to July 1, 1985 949,588

Less: Commitments liquidated after

June 30, 1985 (993,689)

Total Deductions

16,871,632

Fund Balance—Unreserved/Undesignated, June 30, 1985 \$9,524,388



BOAT FUND REVENUE Deposited July 1, 1984, to June 30, 1985

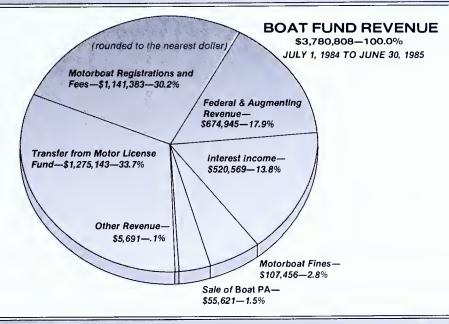
LICENSES AND FEES: Motorboat Registration Fees
Total Licenses and Fees
FINES AND PENALTIES: Motorboat Fines
MISCELLANEOUS REVENUE:Reimbursement from Motor License and Liquid Fuels Tax Funds*\$ 1,275,143Interest on Securities520,569Sale of Boat Pennsylvania55,621Miscellaneous5,691
Total Miscellaneous Revenue
Total Revenue Subject to Executive Authorizations\$ 3,105,863
AUGMENTATIONS: U. S. Coast Guard Grant for Boating Safety
Total Augmentations\$ 674,945
GRAND TOTAL ALL REVENUE DEPOSITED IN BDAT FUND
*Act 65, Session of 1931, as amended March 12, 1957, provides for an annual transfer to the Boat Fund the amount of the Liquid Fuels Tax paid on liquid fuels consumed in the propulsion of motorboats and other motorcraft on the waters of the Commonwealth, including waters bordering on the Commonwealth.

BOAT FUND — EXPENDITURES & COMMITMENTS BY DIVISION Incurred July 1, 1984, to June 30, 1985

Executive Office	20,232
Comptroller	53,800
Bureau of Administrative Services	275,321
Boating Safety — Information and Education	277,406
Legal Services	3,921
Division of Engineering:	
Administration	6,401
Architectural/Engineering Section	47,142
Construction Section	483,447
Property Maintenance Branch	263,472
Bureau of Fisheries & Engineering Administration	39,741
Watercraft Division	918,848
Law Enforcement Division	1,985,269
Boat Fund General Operations Total	\$4,375,000
Department of General Services — General State Authority Rentals	1,985
Department of deficial octations and deficial otate nationly floridae vivial octations	
Total Expenditures and Commitments	\$4.376.985
I near Exhaumentago and commentages	

FISH COMMISSION BALANCE SHEETS June 30, 1985

ASSETS	FISH FUND E \$ 6.952	BOAT FUND \$ 23.867
Cash with Treasurer	113,781	486
Cash in Transit	192,978	-0-
Temporary Investments	11,187,881	4,544,782
Accrued Interest Receivable	135.858	31,478
Accounts Receivable	40,038	-0-
Due from Other Commonwealth Funds	57,429	637,571
Grants Receivable-Federal Government	528,606	-0-
Total Assets	\$12,263,523	\$ 5,238,184
LIABILITIES		
Vouchers Payable	\$ 63,926	\$ -0-
Accounts Payable and Accrued Liabilities	757,979	- 0-
Due to Other Commonwealth Funds	542,078	<u>-0-</u>
Total Liabilities	\$ 1,363,983	\$ -O-
FUND EQUITY		
Reserved for Current Encumbrances	\$ 1,374,076	\$ -0-
Reserved for Restricted Revenue		-0-
Fund Balance-Unreserved Undesignated	9,524,388	5,238,184
Total Reserves and Fund Balance	\$10,899,540	\$ 5,238,184
Total Liabilities and Fund Equity	\$12,263,523	\$ 5,238,184



PENNSYLVANIA FISH COMMISSION BOAT FUND STATEMENT OF UNRESERVED FUND BALANCE

FOR THE FISCAL YEAR ENDED JUNE 30, 1985

Fund Balance - Unreserved/Undesignate June 30, 1984	d, \$4,574,826	Lapses from Prior Year Appropriations	590,000
		Beginning Fund Balance and Additions	\$9,615,169
Add: Revenues			
Actual Cash Receipts, July 1, 1984, to		Deduct: Expenditures and Commitments as of	
	808,08	June 30, 1985 from Current	
Cash in Transit	486	Appropriations	4,376,985
Receivables as of June 30, 1985:			
Interest on Short-Term Investments	31,478	Fund Balance - Unreserved/Undesignated,	AF 000 101
	4,450,343	June 30, 1985	\$5,238,184

Pennsylvania Fish Commission Directory

EXECUTIVE OFFICE Ralph W. Abele, Executive Director 717-657-4515 Chief Counsel, Dennis T. Guise	CONSTRUCTION & MAINTENANCE DIVISION Eugene Smith, Chief
Comptroller, Ross E. Starner	K. Ronald Weis, Chief
OFFICE OF INFORMATION Education, Stephen B. Ulsh 717-657-4519 Broadcasting, Larry Shaffer 717-657-4519 Media Relations, Lois Howard 717-657-4518 Adopt-a-Stream, Dave Wolf 717-657-4519 PA Angler/Boat PA Editor, Art Michaels 717-657-4520 PA Angler/Boat PA Circulation, Eleanor Mutch 717-657-4521	FISHERIES DIVISION Delano Graff, Chief
BUREAU OF ADMINISTRATION (State Headquarters) Paul F. O'Brien, Director 717-657-4522 Personnel & Employment, Allison J. Mayhew. 717-657-4528 Budget Analyst, Donna Grey. 717-657-4532 Real Estate, John Hoffman. 717-657-4525 Purchasing (Harrisburg), Sheila Green. 717-657-4533 Purchasing (Bellefonte), Dennis Schultz. 814-359-5131 License Section, Mary Stine, Supervisor. 717-657-4534 Federal Aid Coordinator, Glen C. Reed. 717-657-4531 Office Services Supervisor, Chester Peyton. 717-657-4527	Fisheries Environmental Services Section, Jack Miller, Chief
BUREAU OF WATERWAYS Gene Sporl, Assistant Executive Director 717-657-4538 John Simmons, Administrative Officer	Area 3: Bruce A. Hollender 814-359-5118 450 Robinson Lane, Bellefonte, PA 16823-9616 717-477-5717 Area 4: David W. Daniels 717-477-5717 Box 88, Sweet Valley, PA 18656 717-588-6388 Area 5: Craig W. Billingsley 717-588-6388 PA Fish Commission, Bushkill, PA 18324 215-847-2442 Area 6: Michael L. Kaufmann 215-847-2442 Box 556, Revere, PA 18953 717-486-3710 Area 7: Lawrence L. Jackson 717-486-3710 RD 5, Box 393, Carlisle, PA 17013 814-445-8974 RD 2, Box 39, Somerset, PA 15501-9311 814-445-8974
Edward W. Manhart, Chief	FISH CULTURE STATIONS Bellefonte, William Hoover, Superintendent
BUREAU OF FISHERIES AND ENGINEERING Edward R. Miller, P.E., Assistant Executive Director 814-359-5152 Robinson Lane, Bellefonte, PA 16823	Box 1, Star Route 2, Tionesta, PA 16353

Robinson Lane, Bellefonte, PA 16823

Dennis Ricker, Administrative Officer 814-359-5161

Fred W. Johnson, Water Resources Coordinator 717-657-4546 Robert Hesser, Fishery Resource Biologist 814-359-5158 State Headquarters: 3532 Walnut Street, Harrisburg, PA 17109 Mailing address: P.O. Box 1673, Harrisburg, PA 17105-1673



Lehigh County

by Fred Mussel

ehigh County offers a diversity of fishing waters scattered throughout its varied topography of 340 square miles. From the gently sloped farmlands in the county's northwest section across suburbia to the urban Allentown-Bethlehem area, the county is best known for its excellent trout fishing for both stocked and wild species. The people of Allentown have demonstrated good stewardship over their resources, and the best native trout streams are actually within the city limits. Warmwater fishing is available mostly on Leaser Lake, the Lehigh River, and the many small ponds that dot the area.

Leaser Lake

This Fish Commission owned, county maintained lake of 117 acres is in northwest Lehigh County, and it provides fair fishing for warmwater species and great fishing for trout. There are three access areas (two with boat launching ramps), and picnic and sanitary facilities maintained by the county. No swimming is permitted, and there are no boat rentals available. Electric motors only are allowed. The lake is open for fishing from 5 a.m. to 10 p.m.

You can get to Leaser Lake by taking Route 143 north off Route 22 at the Lenhartsville exit, or 143 south off Route 309 at New Tripoli. The village of Jacksonville, where the lake is located, is about 6 miles from either routes 22 or 309.

Best known for its trout fishing, Leaser is stocked with rainbow trout with one pre- and two in-season stockings

before May 15, and two fall stockings. The coves at the extreme northeast and northwest sections of the lake are always good for trout in the spring, fall, and especially winter. The shoreline along the west parking lot for about 200 yards above the spillway is excellent for trout in the spring and early summer because of its sharply dropping shore.

Trout are taken on worms, minnows, cheese, and spinners, but in the fall and early winter, fly fishermen do well on streamers and wet flies. Most deadly is the black Wooly Bugger streamer. There are a few anglers who troll wet flies slowly in the spring, and these fishermen have had some fantastic days.

For ice fishing, tiny jigs or weighted flies tipped with a meal worm or mousy grub produce trout. Many are taken from shallow water in the coves, especially in the mornings. Ice fishing is only fair for warmwater species and panfish. For the panfish, mainly perch and bluegills, stick to the cove areas with meal worms on a tiny dot or marabou jig For crappies, try small minnows or Twister Tail jigs. Walleye and pickerel with an occasional bass are taken on live bait or on an eighth-ounce Kastmaster or Swedish Pimple.

Catasauqua Pond

This waterway is a very popular 5-acre county-owned pond close to southeast Allentown. Weedy and shallow, it provides good largemouth bass and panfish action. To find it, take the 15th Street exit south off Route 22 to Tilghman Street. Take Tilghman Street east in the city of Allentown across the Lehigh River, and take an immediate left onto Dauphin Street. About one-half mile on your left will be the Fish Commission's Kimmet's Lock Access area on the Lehigh River. After another half-mile, at a sharp left bend in the road, you will see the pond on your left.



Look for good panfish action in Lehigh County at Leaser Lake, Catasaugua Pond, Waldheim Park Ponds, the

Lehigh River, and Jordan Creek. In Montgomery County, try the Schuylkill River and Loch Alsh Reservoir.

Bluegills can be fooled with worms, flies, and small Twister Tails. Look for holes in the weed cover and drop your offering in as soft as possible. They are easy to catch off the spawning beds in spring near shore. Bass fall for minnows, nightcrawlers, and various weedless lures. Try a Johnson spoon with pork rind or a weedless rubber frog tossed right into or on the weed beds over at least a foot of water. The best fishing is at the southern end of the pond near the overflow pipe. Ice fishing is good, but very few anglers bother to try because of the shallow depth and weeds. The area is rough and unimproved. No facilities of any kind are available.

Waldheim Park Ponds

In Allentown, on South Mountain at Waldheim Park, these two adjacent 2-acre ponds have bass and panfish.

Take the Emmaus Avenue Exit east off Route 309 about 3 miles south of Route 22. About a mile on the right is 10th Street. Travel 10th Street as it loops around the top of the park. As you start back down the mountain, the ponds are on the right, one next to the road and the other behind it. Plenty of small bluegills and an occasional nice bass are caught here. Common fishing methods for these species can be followed. Now and then, usually in November or

sometimes through the ice, stringers of beautiful crappies up to ¾-pound each are taken. It is far from a dependable occurrence, but well worth trying for. Small minnows or yellow and white twister tails do the trick.

Furnace Dam

Located in the town of Emmaus south of Allentown, this 2-acre pond offers a lot of trout action from stockings by coop nurseries and by the Optimists Club.

Take Cedar Crest Boulevard south off Route 309 about 2 miles south of Route 22. About 3 miles from the end of the boulevard, turn left onto Chestnut Street. Go about a quarter-mile and take 10th Street on your right. About a half-mile farther on 10th Street, you'll see the dam on the left.

Trout fishing is good into June with the dam breast area the best location. Typical trout baits work, but especially effective here are the buoyant baits such as floating cheese bait or air-injected worms. Fish these with a weight 6 inches to 12 inches from the hook, and you will be presenting your bait that distance above the mucky bottom for easy visibility.

Carp fishing is good, and they are big. Fish dough balls, corn, or prepared bait on or near the bottom.

Lehigh River and Canal

Running along the eastern border of the county for about 20 miles, the river provides fair to good fishing for warmwater species—pickerel, smallmouth bass, muskies, and panfish, with an occasional trout taken in the cooler months.

North of Allentown, Route 145 parallels the river to Carbon County, and access is gained by roads east of this route.

Popular spots outside the city are: Near the Race Street Bridge in Catasauqua, the broken Hocky Dam right above the river bridge connecting Hockendauqua and North Catasauqua (take Lehigh Street east off Route 145), the dam about 100 yards downstream from the Cementon, Northampton Bridge (Route 329 east off of 145), and the old breached dam about a mile upstream from the town of Treichlers where Route 145 crosses the river.

Near the town of Laury's Station, the river comes close to Route 145 and easy access is found there. Fishing is usually from the shore or by wading because there are no public access areas outside of Allentown. In the city, because of easy access and two launching ramps, you will find more anglers than on any other section of river. There is a small boat ramp, parking lot, and shore access at the Fish Commission's Kimmet's Lock Access area (see directions under Catasauqua Pond) and at Canal Park.

Canal Park can be reached by taking the 7th Street exit south off Route 22 to Hamilton Street. Go east (left) on Hamilton and after crossing the river take an immediate right. Follow the signs to Canal Park. In that same area is a popular fishing spot below the Hamilton Street Dam.

There are no horsepower restrictions on the river. The best fishing in the Allentown section is from the islands located about a mile downstream from the Canal Park ramp upstream to the Route 22 bridge. Smallmouth bass action turns on around August until cold weather, and they can be caught in this section and upstream on nightcrawlers, shiners, minnow-imitating plugs, and yellow or white small twister tails.

From the Canal Park ramp upstream to the railroad bridge is the musky hotspot. During the summer months and into early fall, these big bruisers hit large silver, gold, or perch-finish Rapalas. Fishing large shiners in the four- to six-foot depths also works. Afternoons and evenings produce the best. The usual procedure is to troll upstream to the bridge and cast while drifting back downstream to the ramp area.

In the late winter and early spring, the white sucker gets the most attention along the river. These fish are caught on small red worms worked on the bottom with light line and small hooks. They like to congregate below the dams and are easily caught. The dam at Cementon is especially good as is the Canal Park area.

Later in the spring, bullheads and catfish are taken using worms, nightcrawlers, or any prepared or commercial stink bait. The Allentown area again is the place to go. In 1984-85, yellow perch and crappies suddenly appeared in the area below the Hamilton Street Dam, and some full stringers were taken from April to October. Hitting small twisters, worms, and minnows, these fish appeared out of nowhere and were a pleasant surprise. Whether this action will

continue in future years remains to be seen. The upstream river in the Treichlers-Laury's Station area is underfished because of poor access. The water in this area does hold fish, and a canoe float trip from the Treichlers area to Cementon should produce great action, especially for pickerel and bass.

Little Lehigh Creek

This waterway is the most heavily stocked, most heavily fished, and best-known trout stream in the area. Starting near Mertztown in Berks County, this creek goes through many changes as it flows through farm country, suburbia, and finally into the city of Allentown where it enters the Lehigh River. Unlike most streams, the upstream section, above Spring Creek at Route 100, is the warmest and least productive. From Spring Creek to the area of Cedar Crest Boulevard there is good trout fishing, but the best is downstream into and through the Allentown Park system. Year-round this area has the water quantity, quality, and highest natural trout reproduction.

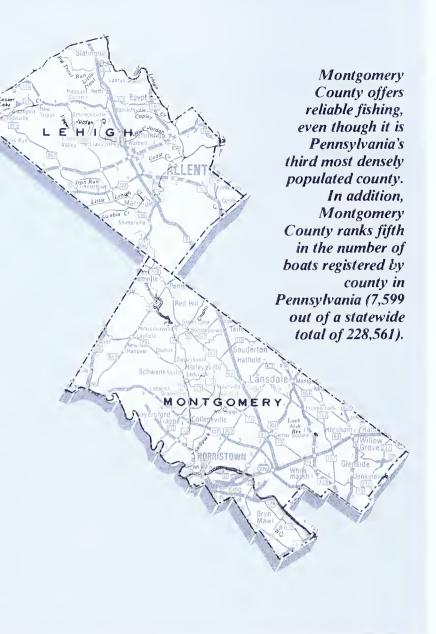
A popular fly fishing stream, the most heavily fished area is from Keck's Bridge on Keystone Road below the Lehigh Valley Country Club downstream through the park system. Highlighting this section is the fly-fishing-only, no-harvest area downstream about a mile from Keck's Bridge. Loaded with trout, fishing this area is almost like fishing in the hatchery, which is located next to the creek. In this one-mile stretch, trout are numerous, but experienced and discriminating. They offer quite a challenge.

Take Cedar Creek Boulevard south off Route 309. A quarter-mile from 309 turn left onto Fish Hatchery Road. Then it's a quarter-mile to the stream at the bottom of the hill

The other special regulation area is a fly-fishing-only section about a mile upstream of Cedar Crest Boulevard. Take that boulevard exit south off Route 309 for about 2 miles. Before crossing the stream, take a right up the hill on Lower Macungie Road. Go about a mile and turn left on Wild Cherry Lane to the stream. This fly fishing area runs from Wild Cherry Lane downstream about a mile to an old mill dam. Check your summary for exact rules and locations of these specially regulated areas.

Fly hatches are similar in both special areas and in the rest of the stream below Route 100. Midges, wets, and streamers are the winter flies. The real action starts about Memorial Day with pale evening dun or sulphur dun hatches in late evening. They last until the end of June. The little blue olive hatches intermittently from late March until fall, as do several species of caddises. Match the size and color to what you find at the time, but a good year-round imitation of a caddis pupa in sizes 12-16 is the Ashe Salmon Fly. The Sawyer Pheasant Tail nymph is worth trying, too. Summertime, July through September, is the time for the Trico action in the morning till noon. Good eyesight is needed to fish these tiny dark-bodied light-winged mayfly imitations in sizes 22-24. Terrestrials are also used at this time, mainly dark-bodied beetles and black ants with an occasional green inchworm in sizes 14-20. A rod that can handle 4-weight or 5-weight line is about right.

Fly fishing is popular, but more anglers hurl hardware and bait in the open areas of the stream than anything else. Minnows, corn, cheese, CP swings, and Rooster Tail



spinners account for thousands of trout. Fishing is great, but the crowds are, too, from opening day until June. After that you can pursue the many native trout and leftover stockies in relative solitude. Migrations of trout upstream in October and November offer great fishing at two popular spots—right above the no-harvest area and at Fountain Park Dam below the 8th Street Bridge in Allentown. Three-fish-a-day limits are common. Bait is used by almost all anglers at this time of year at these locations.

Cedar Creek

This stream has a split personality. Downstream from Lake Muhlenberg it is barely good enough for put-and-take trout. Above Ott Street upstream from Lake Muhlenberg it is the county's best, and is Class A wild trout waters.

The creek has a great population of wild brown trout from above the lake to Dorney Park, and it is nearly all owned by the city and county. The Cedar is a small stream with undercut banks the major type of trout cover. Fishing is more successful in the early mornings and late evenings when the brownies venture out to feed. The waterway is in the park system with all the activity, which keeps the trout under cover during most of the day. Natural baits are best for these native fish, and fly hatches mimic most of those on the Little Lehigh Creek. To find the Class A water, take the Hamilton Boulevard exit east off Route 309 to the Dorneyville crossroads. Turn left at the light onto Cedar

Crest Boulevard. About a mile on the boulevard you will cross the stream at a traffic light. Turn right in less than a mile to Ott Street. The stream is on your right.

Jordan Creek

The longest stream in the county, Jordan Creek starts at the foothills of the Blue Mountains and goes through many changes before it reaches the Little Lehigh Creek in Allentown near Union Street. The aesthetics of its upstream areas are pleasing, especially through Game Lands 205.

This creek has many long, low, clear stretches with little cover in the summer months. Loads of fish are concentrated in the deeper holes and runs. Light line and long casts with worms, minnows, twister tails, and soft plastic lures produce redbreast sunfish, bluegills, fallfish, bullheads, and a lot of smallmouth bass, some of which attain a very respectable size. The deeper the hole, the bigger the fish.

Becoming as popular as the Little Lehigh Creek, this large stream has had many new areas added to the stocking list in recent years and provides excellent put-and-take trout fishing from opening day until mid-June, when the warmwater species take over. It is stocked along its entire length from Route 309 downstream, bypassing only two private areas.

There is no natural trout reproduction in the Jordan, although the Upper Jordan looks like a classical and beautiful trout stream down to the small town of Guthsville, right on Route 309 about two miles north of Route 22. When the stream reaches Allentown, the trout fishing is still good, although the traffic and crowds are a distraction. The most popular fishing areas are Jordan Park off 7th Street in Allentown and Wehr's Dam and Kern's Dam near Orefield off Route 309 north of Route 22. The county owns some walk-in-only property near Helfrich Spring Apartments, about a mile above Jordan Park. This is a popular, pleasant area to fish.

Fly fishing is available in the Upper Jordan until mid-June, but most anglers use the typical trout baits and lures. If you carry minnows and corn with a few spinners in your vest, you won't leave empty-handed.

PA

Fred Mussel is the Lehigh County waterways conservation officer. He thanks Al Miller and Joe Kohler for their information on fly fishing in this article.

Montgomery County by Guy A. Bowersox

Pennsylvania's third most densely populated county offers notable trout and warmwater angling, despite its metropolitan and heavy industrial setting. Here are details of the county's most productive hotspots.

Loch Alsh Reservoir

This 8-acre lake is nestled among a grove of trees along Loch Alsh Avenue in Ambler. Steadily stocked with rainbow trout throughout the spring months, this lake offers fine family fishing after the opening weekend's onslaught. The Alsh usually receives a fall stocking, so anglers can expect fine fishing through October and November. Size 0 and 1 spinners, minnows, cheese, eggs, mealworms, and garden worms are the favorite baits. In addition, don't be surprised if you land a nice catch of crappies while you're fishing this lake.

Perkiomen Creek

This stream offers some of southeastern Pennsylvania's finest musky fishing. Flowing nearly 20 miles through the historic, scenic Perkiomen Valley, this stream parallels Route 29 from Green Lane downstream to Collegeville, and then to Oaks, where it empties into the Schuylkill River. Access to this stream is plentiful from shore, because much of its borders are county owned and open to the public.

A canoe excursion on the "Perky" is perhaps the most effective way to find the big ones—and let your mind absorb the truly memorable scenery along the way. The "Perky" is a receiving stream from a sizable watershed of fine bass-producing tributaries and stocked trout waters. Smallmouth and largemouth bass, crappies, muskies, carp, and bluegills are all here to add to your creel.

Trophy-sized muskies haunt this stream, and are most often captured while feeding at the mouths of the Perky's tributaries—Unami Creek below Green Lane and Swamp Creek at Schwenksville. These monsters are usually fooled with minnows on bobbers or nightcrawlers.

Annually dozens of 3-pound to 6-pound bass are taken from the Perky mostly with minnows, crawlers, hellgrammites, or spinners. Bass hotspots are immediately below any of the more than a dozen low-head dams on the stream.

During the spring and summer months, ideal carp fishing can be found on most of the Perky's still pools. Whether by rod or bow, carp fishing this water is most often a rewarding experience. Anglers and canoeists wanting to traverse the Perkiomen would do well first to secure a Montgomery County map from the county courthouse in Norristown. This map depicts all waters, streets, roads, and public properties within the county.

Skippack Creek

Stocked heavily with rainbow and brown trout during the spring, this stream produces angling enjoyment for thousands during April and May. The "Skippy" is a lowlying, slow-flowing waterway that meanders through some 6 miles of the wooded Evansburg State Park.

Worms and minnows fished on ultralight and light spinning tackle fool fish here. Size 0 and 1 Mepps, Rooster Tails, and Blue Fox Vibrax spinners are good, too.

The stream is crossed by Route 73, Route 422, and Ridge Pike, just east of Collegeville. Plenty of parking is available at designated sites, and access along the shore is easy by way of established foot and horse trails that border most of the stream. A map and details of facilities available can be obtained by writing to Evansburg State Park, P.O. Box 258, Collegeville, PA 19426.

Wissahickon Creek

This stocked trout stream is a good bet for early season trout action. About three miles of the stream are stocked

with rainbow and trophy palomino trout during early spring, and the best fishing is found within the Fort Washington State Park, located along Route 73 at Fort Washington. Worms, eggs, and spinners are the most successful offerings.

Schuylkill River

Largemouth and smallmouth bass, muskies, channel catfish, crappies and carp are caught in the Schuylkill. They're all here in trophy size and numbers in this sizable waterway, which meanders from rural Schuylkill and Berks counties through industrial suburbia to downtown Philadelphia. Hotspots in Montgomery County are:

- Blackrock Pool (accessed by boat from the PFC access area along Route 113 just north of Phoenixville)
- Blackrock Dam (located just upriver of the Route 29 bridge crossing from Phoenixville to Mont Clare)
- the mouth of Perkiomen Creek (take Egypt Road west from Route 363 to Oaks. Turn left at the light and follow Brower Avenue to the dead end).
- Norristown Pool (access by boat from Valley Forge National Park at Betzwood Access just off Route 363, or from the public ramp on Haws Avenue in Norristown).
- Norristown Dam (adjacent to bridge connecting Norristown to Bridgeport).
- Flatrock Dam and Pool (Gladwyne exit off Schuylkill Expressway onto River Road).

Live baits, spinners, and plastic action tails on jigs are your best bet for success in these waters.

PA

Guy A. Bowersox is the waterways conservation officer for northern Montgomery County. Thanks goes to Dave Corl, waterways conservation officer for southern Montgomery County, for his input into this article.

Trout Stocking—Lehigh and Montgomery Counties

Here are the best trout fishing bets for Lehigh and Montgomery counties, with the number of trout each waterway received in 1985's inseason and preseason stocking.

4,800
31,550
8,000
14,400
4,600
4,900
8,000
3,400
6,500
17,900
4,600
5,300

ANGLERS CURRENTS



Green Reappointed to Fish Commission

Commissioner Leonard A. Green, of Carlisle, has been reappointed by Governor Dick Thornburgh to the Pennsylvania Fish Commission for another term of four years. He was first appointed to the 10-member panel in 1975.

Commissioner Green is currently eastern vice president of the National Wildlife Federation and chairman of the board of trustees of the Pennsylvania Federation of Sportsmen's Clubs Endowment Foundation. He also serves on the board of directors of the Pennsylvania Wildlife Federation, and he is a past-president and current board member of the Pennsylvania Forestry Association.

Anglers W Sam Elerett

Wintertime offers an opportunity to look over your plugs for damage. Check the hooks. Do they need replacement or sharpening? How about the hair and feathers on your lures—do they need to be changed? Check also the paint finish of your lures. Perhaps they need touching up.

Go through your stock of flies now, and take inventory. Note your losses and list flies you need to tie or buy for this spring.

If you haven't already done so, spray your outboard engine's carburetor with a fogging oil and crank it a few times. This oil coats the moving parts, protecting them during the winter from corrosion and rust. Perform this task every month during the winter.

Check your trailer tires frequently this winter. If you leave the tires on your trailer, be sure to rotate them so that moisture doesn't collect in one place, thus preventing the tires from rotting and the metal parts from rusting.

Which outdoor shows do you plan to attend this winter? Bring a tote bag or a day pack to outdoors and sports shows so that you can carry catalogs and brochures comfortably.

If you perform your own reel repair and maintenance this winter, be sure to keep the parts orderly so that you can put them back properly. Using an egg carton can facilitate this work.

Check out some new fishing spots this winter. The low water conditions in winter on many waterways offer you the opportunity to find fish-holding structure that might be under water in spring and summer. In addition, because the trees are bare, you can often see places that are hidden from view in warmer weather by tree leaves.

When you buy your 1986 fishing license, write the license number on your summary. In this way, if you lose the license, knowing the number makes replacing it easy and quick.

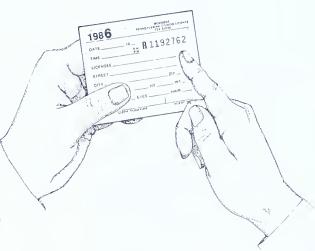


illustration by Rose Boegli

Short-shanked hooks are your best bet for fishing salmon eggs. They hide the offering completely, and they hold the eggs more firmly in place than do other hooks.



Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities

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State Record Rainbow Trout

Philip C. Grosklos, of York, caught an 11.33-pound rainbow trout in Yellow Breeches Creek (Cumberland County) on Sunday, October 6, 1985, a new state record. His 271/4-inch trout measured a girth of 18 inches. The fish inhaled a spinner.

The former state record rainbow trout, a 10-pound, 111/4-ounce fish that measured 271/2-inches long, also came from Yellow Breeches Creek. Richard L. Pryor, of Carlisle, caught it in 1979.

Grosklos's rainbow trout was the sixth state record fish caught in 1985. The others were a striped bass, coho salmon, steelhead, flathead catfish, and a bowfin.

New Bowfin State Record

Gregory M. Luciano, of Erie, caught a new state record bowfin in Presque Isle Bay on July 23, 1985. The fish weighed 11.07 pounds and was 30 inches long. Luciano hooked the behemoth bowfin using a shiner.

Luciano's catch bests the old record, a bowfin of 9 pounds, 9½ ounces, caught in Presque Isle Bay in 1983 by Matt Kaliszewski of Erie.

For complete details on Angler's Awards, Record Fish, Husky Musky Club, and Biggest Fish of the Year, send for the Commission's publication on the Angler Recognition Program. Include a self-addressed, stamped business-sized envelope with requests. Contact: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

Conservation Leadership Schools

If you are aged 15-17, the Pennsylvania Conservation Leadership Schools offer you the opportunity to spend two weeks in the mountains of central Pennsylvania learning about forestry, wildlife, water quality, and more. The program is operated by The Pennsylvania State University in cooperation with the Department of Education, the Pennsylvania

Federation of Sportsmen's Clubs, the Pennsylvania Fish Commission, the Pennsylvania Game Commission, and other environmental and conservation groups. It is located in the middle of 7,000 acres of field, forest, and streams in Huntingdon County, PA.

While living in comfortable 4-person wall tents, students participate in 2-week sessions that involve activities such as forestry (timber management), water quality assessment, wildlife studies, conservation projects, how to give a good conservation presentation, the construction of working energy projects (such as a full-scale usable solar shower or solar oven), how to influence conservation legislation, herpetology, dendrology, caving, wild edibles, canoeing, fishing, and much more.

The cost for two weeks is \$160 and it covers everything. Session 1 is June 22 to July 5; Session II is July 6 to July 19; and Session III is July 27 to August 9. For more details, contact: Harry Weaverling, Office of Continuing Education, Penn State University, 109 Grange Building, State College, PA 16802. The phone number is 814-865-3443.

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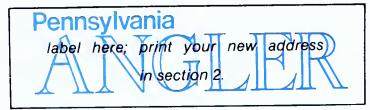
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Straight Talk

COAL

The state's bituminous coal industry was born about 1760 on Coal Hill, now Mount Washington. Here the Pittsburgh coal bed was mined to supply Fort Pitt.

In two centuries, over 10 billion tons of bituminous coal have been mined in Pennsylvania, peaking in 1918, when 177 million tons were produced by 181,000 men. There are presently 1,036 active surface coal mines in Pennsylvania, and 121 active deep mines, and last year they produced about 74 million tons, of which approximately half came from surface mines.

Employment in the bituminous



Ralph W. Abele Executive Director Pennsylvania Fish Commission

industry, considering production, is not split equally. Deep mines employed 13,280 persons, while surface mines employed only 7,650 miners—about one-third of the total. Bituminous coal industry employees are among the best trained and highest paid workers in the Commonwealth, exceeding employees involved in durable goods, food products, textile products, printing and publishing, petroleum and coal products, stone, clay, and glass products, primary metals, machinery and chemical products.

The coal industry became the focus of much more attention during the oil crisis in the 1970s, but one could say that the coal industry in Pennsylvania is depressed, especially in western Pennsylvania.

There is no question that coal is important to Pennsylvania and to the nation, but we submit that its production and use give us more problems than they should.

The Pennsylvania Fish Commission initiated 46 prosecutions in 1985 for pollution, siltation and other difficulties from mining activities. Many offenders were repeat offenders, and many have not been brought to task as required by the Surface Mining Act of 1970 by the Department of Environmental Resources, whose duty that is. Thousands of acres of pre-Act mines are still unreclaimed in spite of federal and state monies available for such reclamation. They still pollute over 2,500 miles of Pennsylvania's 45,000 miles of streams. The most extensive users of coal in Pennsylvania are the electric utility companies. That, of course, gives us problems with acid precipitation and deposition.

The coal industry in Pennsylvania

has a disproportionate amount of influence, considering its employment of less than 23,000 employees out of a total work force of almost 5 million.

In the 1960s, the strip miners were paid in \$2 bills to call attention to their importance in the economy. That effort failed because almost no one noticed.

At current levels of production, Pennsylvania has more than 250 years of coal reserves remaining in the ground. By method of mining, Pennsylvania would have a 546-year reserve base for underground mining, and a 48-year reserve of surface mineable seams at present production rates. When citizens and agencies affected adversely by mining methods and practices attempt to set aside (by law) areas as unsuitable for mining, one can count on a great cry from the industry that it needs every pound of coal it can get out of the ground, and as fast as it can get it.

The federal agency responsible for regulating strip mining is a spectacular failure that cannot be saved by anything short of a massive management overhaul. The Interior Department's Office of Surface Mining (OSM) is incapable of enforcing the law or carrying out court orders. More than half of the 4,000 orders that the OSM has issued to halt mining abuses have simply been ignored. The number of unabated cessation orders has actually increased and not decreased since the first court order in 1982.

In Pennsylvania we have stricter enforcement, but it is far from what it should be.

We are appalled when high-level officials in DER advocate that their mining inspectors "dare to be pro-coal."

Fælk W. Phele

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Pennsylvania ANGIR

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Are You a Conservationist-Angler? by Art Michaels Caring anglers blend conservation ideas with their fishing know-how
Chasing Walleye Under the Ice by Mike Bleech Finding walleye is one thing; catching them is another. Both require fancy footwork and smart strategies
Shad Restoration in Pennsylvania by Dennis Scholl Shad restoration in the Keystone State isn't new, but the latest efforts are significant
Ice Angling with Small Fry by Joe Workosky Taking children ice fishing requires special preparation and procedures
What Is an "Area Fisheries Manager"? by Richard A. Snyder AFMs are a special breed of Commission field employees, and they greatly influence your sport
A Homemade Rod Guide Wrapper by Sam Everett This inexpensive device lets you wrap new rod windings and repair old ones with top-quality results
County Features—Carbon and Monroe Counties by Andrew Toms
Straight Talk

The Cover

Family ice fishing can be lots of fun, and anglers interested in making the most of this special aspect of the sport will want to scan the article that begins on page 14. This month's front cover, photographed by Joe Workosky, shows a family ice fishing scene at Lake Somerset, Somerset County, where the action was for northern pike. Still, there's a drawback to this kind of family fun. A 20-incher must be returned immediately to the water, of course, even though it's still a nice fish. So when the kids are screaming with excitement when so-and-so pulls that 20-incher up, dad dutifully says, "Okay, now, we have to put it back right away." All the kids look at him like he's nuts.

Regulation Roundup 29

Notes from the Streams......30

The photo on this month's back cover was taken by DWCO Don Carey at Harvey's Lake, Luzerne County.

Caring anglers gear their fishing to certain principles. Here are some of those ideas.

Are You a Conservationist-Angler?

by Art Michaels photos by the author

ur ideas are changing on just what a "sportfisherman" is. We all like to catch a lot of fish, and perhaps when we've done that enough times, we consider ourselves "sportfishermen." Or maybe we think we become true sportsmen when we land the largest fish of a species we've ever caught, or perhaps when we own a certain dollar amount of fishing tackle and equipment, or when we know the thrill of a big fish on every cast, or own a big boat.

Still, conservation is the vital aspect of our outdoor ethics, and for the most part, we all understand that conservation measures must be part of our ideas on fishing. We know that as anglers we have a responsibility to be conservationists, but translating this notion into action, with all we may know about the practical aspects of catching fish, is easier said than done.

Here, then, are six ideas on what a conservationist-angler does.

A conservationist-angler returns most of his catch to the

Caring anglers keep fish only when they plan to make a meal of them, or perhaps they have that once-in-alifetime enormous specimen mounted. Otherwise, they release their catches.

Conservationist-anglers also know the proper way to release fish

unharmed, and they gear their fishing to this practice. For example, they don't exhaust a fish they're fighting that they plan to release. You can revive a fish and set it free after a long fight, but a fish battled to the point of exhaustion will likely belly up downstream within 24 hours.

Contrary to popular belief, using the lightest possible pound-test line or leader is not always an act of sportsmanship, because an angler has to play a fish longer on the lightest tackle. Thus, a caring angler uses the heaviest possible lines and leaders so that he can play and release fish quickly.

In addition, conservationist-anglers touch fish as little as possible, they keep their hands out of a fish's gills, and they get their fish back in the water fast. Caring anglers always wet their hands before handling fish. The slippery coating on fish protects them from some diseases, and wiping this coating away could endanger the fish's health.

Releasing fish unharmed is more easily and quickly accomplished with barbless hooks. On some waterways, the use of barbless hooks is mandatory, but why not fish with barbless hooks more often, when it's not required by law? A fisherman can "go barbless" with a regular hook

simply by bending the barb flat against the hook shank with pliers, which is legal on Keystone State waterways where barbless hooks are required. Of course, barbless hooks are available commercially in some hook styles.

When a conservationist-angler lets a fish go, he lowers it gently into the water. He doesn't toss the fish back into the water with a plopping splash. That rough treatment could harm the fish, as can letting it flop around on shoreline rocks or on the bottom of a boat.

When a conservationist-angler hooks a fish deeply, he simply cuts the line close to the fish's mouth, leaving the hook in place, and releases the fish. The fish's digestive juices can "melt" hooks away, and in some cases, fish successfully butt rocks and other objects to free themselves from hooks embedded in their jaws.

Thus, caring anglers fish in ways that make it easy to release fish, but when they hook fish deeply, they don't just give them up for dead.

A conservationist-angler avoids littering, and he picks up litter when he sees it.

Specifically, leaving only footprints when you leave an area is sound advice, and caring anglers save cans, pieces of fishing line, and food



wrapping for the proper place on shore or at home. They keep small receptacles in their cars, campers, tackle boxes, and boats, and they empty them from time to time in a trash bin.

In addition, conservationist-anglers who own motorboats keep their boat engines tuned and in good condition so that no gas or oil enters the water because of their neglect.

A conservationist-angler is informed on environmental issues, and he knows and heeds the current fishing and boating

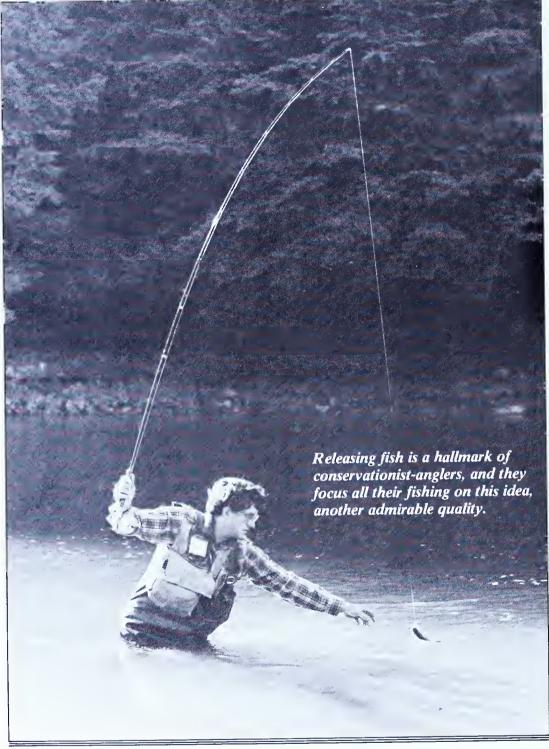
regulations for the waters he fishes and for the species he's after.

Conservationist-anglers don't take the law into their own hands, so they report to the trained, proper authorities what they think are likely to be violations of the fishing and boating laws that they see. In our state, this idea means contacting the nearest Fish Commission law enforcement regional office, all of which are listed on page 51 of the 1986 Summary of Fishing Regulations and Laws, or the Commission Law Enforcement headquarters in Harrisburg.

Boating conservationist-anglers tune their engines and perform appropriate motor and related-equipment maintenance. In this way, no gas or oil enters a waterway because of their neglect.

Caring anglers value learning highly among fellow sportsmen. In most cases, arrests are viewed by law enforcement officers and by conservationist-anglers as the final step in the education process.

Furthermore, the Fish Commission operates a toll-free 24-hour pollution



hotline. It should be used by those who see signs of dead or dying fish along Keystone State waterways. Callers should provide the date and time they first noticed the pollution, the name and county location of the waterway, and the suspected type of pollution. Callers need not give their names, but doing so lets the Commission return the call if additional details are needed. The hotline phone number is 800-854-7365.

A conservationist-angler maintains active membership in conservation organizations.

There are many groups that have fine educational and legislative programs. In addition, joining a group can help an angler become a more successful fisherman, and membership provides an avenue through which he can keep well-informed on the issues that most strongly affect his favorite fishing. Furthermore, through the political action of conservation groups, a caring angler's voice can best be heard and his vote can carry maximum weight.

A conservationist-angler invests in the future by helping to teach the young and others new to the sport.

Not everyone goes out and teaches a youngster how to fish, nor does everyone want to. Even so, a conservationist-angler contributes to conservation education in a way that best suits his capabilities.

For instance, there's the straightforward notion of teaching someone to fish, which in itself can be a series of valuable conservation lessons. But there's also volunteering one's time for other activities that are part of the conservation organization's educational programs. Giving money to educational efforts by conservation groups is another way of helping.

Similarly, in Pennsylvania we have the Wild Resource Conservation Fund, which finances a great variety of nongame wildlife and wild plant research and educational programs. These projects are undertaken by the Fish Commission, the Game Commission, and the Department of Environmental Resources. Pennsylvania's state income tax return provides a space for donations to the fund from a portion or all of the state tax refund, and direct contributions can be made. For complete details, contact: Wild Resource Conservation Fund, P.O. Box 1467, Harrisburg, PA 17120.

A conservationist-angler views the outdoors with respect, and with each fishing trip he learns something new and deepens his commitment to conservation through the sport of fishing.

A caring angler understands the consequences of misusing the outdoors, but he also knows that conservation spawns an increasingly richer overall quality of life for everyone. Thus, a conservationist-angler loves experiencing the outdoors and learning about it. He wants to know more and more about conservation, and he incorporates this knowledge into his fishing and outdoor skills.

Because a conservationist-angler is a learner and a grower, he values sharing information on what he believes are important conservation ideas. For this reason, these considerations aren't the only traits that a caring angler possesses, nor are they the last word on what's right or wrong.

All in all, a conservationist-angler wants the outdoors to win. Through the specific sport of fishing, he seeks to attain greater understanding of the unity in nature and clearer insight into the natural world's workings.

Chasing Walleye Under the Ice



Walleye feed actively during the winter. Wait long enough in one place and you may catch walleye in a good lake. But the anglers who are consistently successful have learned to chase the walleye down. There are a few tricks that tilt the odds for success in the angler's favor, but the one inescapable fact is that this game requires a lot of work. So sharpen your auger blades and limber up your legs and shoulders for a lot of walking and a lot of drilling—and a lot of success.

Tackle

The first order of business is to gather all the required tackle and equipment in a portable package. The basic "finder rig" is a jigging rod and reel, jigs, and some small minnows to add flavor to the jigs. In addition, another rod for bait fishing and a few tip-ups, hooks, and splitshot are handy, to be used when you find a concentration of walleye. All this gear can be carried in a 5-gallon plastic bucket, if it is packed efficiently. A large plastic jar with a waterproof screw-top lid, to carry the minnows, solves the biggest problem. Then, when you find reason to spend some time over one particular hole, you can sit on the bucket. An ice angler's depth finder, which is just a chunk of lead molded to an alligator clip, is usually clipped to a flap on the jacket or one-piece suit.

My jig assortment includes size 7 and size 9 Rapala jigs in an assortment of colors, a few jigging spoons such as the Swedish Pimple and Hopkins Shorty, and some lead heads dressed with various plastic bodies. Colors in the arsenal include white, yellow, chartreuse, silver, gold, orange, green, and combinations of these colors and fluorescents.

The jigging rod is spooled with 6-pound to 10-pound limp mono line. The tip-ups are spooled with braided line with a 10-foot mono leader.

Augers

The good auger with sharp blades is a must. By mid- or late winter, the ice may be more than 20 inches thick. At Kinzua, for instance, I have drilled through about 32 inches of ice! You could be drilling two or three dozen holes in a day of fishing, which is a lot of work, even with sharp blades.



Ice hole hints: Drill your holes about 10 feet to 15 feet apart, and don't waste time jigging in an unproductive hole. If a hole doesn't produce in 15 minutes, move on.

Auger blades should be changed every two or three outings, depending on how many holes it takes to find the walleye. Always carry a fresh, extra set while you're on the ice.

It is also important to learn how to get the best performance out of your auger. The blades of some augers, for example, must often be shimmed to achieve the most efficient cutting angle. Ease of changing blades, ease of sharpening blades, and cost and availability of replacement blades should be carefully considered when shopping for an auger.

Power augers are great, but even the lightweights are bulky and heavy to tote around the ice. An ice sled or a group of walleye anglers working as a team can solve that problem. Some groups of anglers also share the cost of the power augers. The next order of business is deciding where to start fishing. All nifty sounding formulas aside, the easiest way to get a general idea of where to find the walleye is by checking at a local bait shop. At Kinzua, for example, I have caught, or seen caught, walleye just about everywhere. This includes spots where the water is five feet deep and where the water is 90 feet deep. It also includes places with bars, breaks, shelves, and other indescript bottom structure.

New ice

As ice is forming on a lake, the bes fishing is often under the newest ice. You may be able to fish new ice for two or three weeks on some larger lakes.

During summer, anglers look for

walleye under reduced light conditions. However, during winter, the light is already reduced by the angle of the earth to the sun, and by the layer of ice over the water. For this reason, anglers look for walleye under ice with the most light penetration. Experienced ice anglers look for "black" or "blue" ice—ice with few interior blemishes. The dark color is a result of relatively little sunlight reflection. Such ice usually forms fast during very cold weather and on calm water.

Once warm weather hits the ice, it becomes pockmarked and cracked, and loses its dark color. It takes on a white color because it is reflecting more light, letting less light through. Thus, the idea of looking for new ice.

New ice will also have less snow cover, and snow cuts out much more light than does ice. Some anglers go so far as to carry a snow shovel out onto the ice, to clear the snow off a section of ice. Though this may seem far-fetched, I have seen cases when it apparently put extra walleye on the stringer.

Ice fishing success generally falls off by mid-winter, when there may be no "hard" ice left and snow blankets the ice. It appears certain, nonetheless, that the walleye are still very willing to hit a jig or bait. The fall in angling success may be primarily due to reduced walleye movement.

One of my fishing partners theorizes that in mid-winter the walleye spend a lot of time in one

Let your jig assortment for walleye action include lures that are white, yellow, chartreuse, silver, gold, orange, green, and combinations of these colors and fluorescents.

place. To catch them, he reasons, you must drill a lot of holes, and he spurns the idea of setting out tip-ups when walleye contact is made, because there will seldom be more than two or three walleye close enough to any individual hole to be caught. His results make his thoughts on the subject hard to dispute.

Ice holes

Holes need not be drilled far apart, say 10 to 15 feet, and don't waste too much time jigging in an unproductive hole. About 15 minutes is plenty. In actual practice, even a productive hole seldom gets more than 30 minutes of attention. Mark productive holes inconspicuously, and work these holes on the return walk. Apparently, fresh walleye move in to fill vacancies in favorable spots.

A trick to be used when working the productive holes the second time around is to change jigs, or at least jig colors. I also like to fish a different jig after a hole has given up a big walleye. On the chance that another big walleye is in the same area, the time and effort to change jigs is certainly justified. Anglers usually make the assumption that the fish are hitting whatever lure or color they caught their first fish of the day on. Actually, all that means is that the first fish was willing to hit that lure. There may have been other fish in the area that were not even tempted.

Such an aggressive approach to ice fishing for walleye has a counterproductive side effect. Anglers tend to jig their lures too fast, and to be impatient. This strategy is not intended to be a fast-moving method. Jig the lure slowly, and give each hole a fair shake. It would seem a shame to spend more time drilling a hole than fishing through it, but I have watched it done.

Chasing walleye under the ice is one of the most physically demanding sports the Pennsylvania angler may encounter. Let's hope that you will be greeted by active, moving walleye on every ice outing. But if not, keep your gear light and your auger blades sharp.

Outdoor writer-photographer Mike Bleech hails from northwest Pennsylvania.

RESTORATION



by Dennis J. Scholl

The Fish Commission's Van Dyke shad rearing facility on the Juniata River is the only shad rearing hatchery in the United States. These photos show the variety of activity there.



merican shad restoration is not new to Pennsylvania. On March 30, 1866, Commonwealth Governor Andrew G. Curtin signed into law an act that called for the construction of fish passageways on Susquehanna River dams and weirs that impeded the shad's annual spring spawning migrations.

In 1867, thanks to the perseverance of the state's first Commissioner of Fisheries, James J. Worrall, a fishway was constructed on a dam that traversed the river at Columbia, PA. Constructed in the 1830's, the dam limited the shad's migrations into the Susquehanna to the river's lower 45 miles. But the passageway failed to provide the shad upriver access, and several subsequent attempts at Columbia were also unsuccessful.

From 1904-1932, four hydroelectric dams were built on the river's lower 55 miles—at Conowingo, Maryland, and Holtwood, Safe Harbor, and York Haven, Pennsylvania State-of-the-art fish ladders were incorporated into the Holtwood facility, but they also failed to pass fish, and no further passageways were required to be built in the lower river.

The future did not look bright for shad restoration in the Susquehanna, which was once esteemed as the greatest shad river on the East Coast. In lieu of fish passage construction, the utilities that owned the dams agreed to make annual payments to the Fish Commission, but that didn't help the shad reach their ancestral spawning grounds, which extended as far north as Binghamton, New York.

The Lehigh and Schuylkill

Circumstances were much the same on the Lehigh and Schuylkill rivers, where shad at one time provided subsistence and livelihoods for many people.

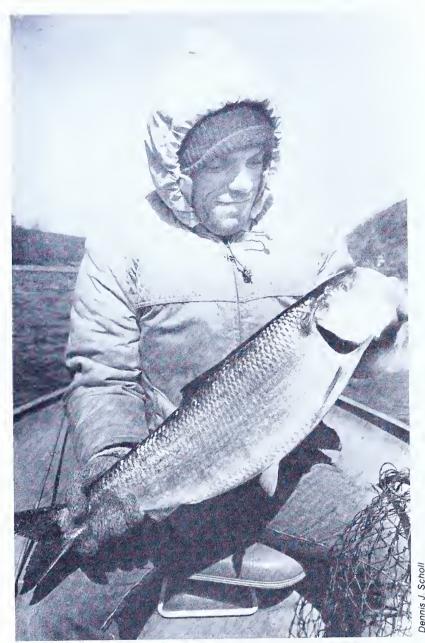
Left to right, Craig Billingsley and Leroy Young of the Commission, Dave Chiles of the Lehigh River Preservation, Protection and Improvement Foundation, and Joseph Miller of the U.S. Fish & Wildlife Service plan their seining strategies. Experimental shad restoration efforts were conducted by the Fish Commission as early as 1973-76, and in 1980-82, Area Fisheries Manager Craig Billingsley conducted a variety of research efforts on the Lehigh.

The Lehigh's shad, which were once able to make their way into present-day Carbon County, were cut off from the river in 1829 when the Lehigh Coal and Navigation Company constructed a timber and rock crib at the Lehigh's confluence with the Delaware. A passageway was not even considered.

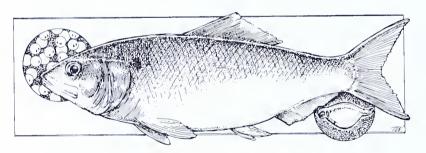
The Schuylkill's annual migrations came to an end when the Falls Dam was constructed in Philadelphia in 1810. In 1818-19, two more dams, the Fairmount and Flat Rock, were added to the Schuylkill. The Fairmount is located below the Falls Dam and the Flat Rock, above. Again, fish ladders were not a part of the projects. The Falls Dam was inundated by construction of the Fairmount Dam and no longer functions as a dam.

The three rivers have not experienced natural migrations of shad in more than 150 years, and the Schuylkill's drought of anadromous fish is even longer. Attempts have been made to provide shad access to the upper Susquehanna and Schuylkill, but success has been very limited.

On the Susquehanna, an experimental fish trap and lift were added to the Conowingo Dam in 1971, and in 1979, a fish passageway opened on the Fairmount Dam in Philadelphia, the first modern passageway built in the



Delaware River American shad like this one are terrific fighters on light tackle and make excellent table fare.



Commonwealth. Unfortunately, relatively few shad enter the Schuylkill because there is no hereditary reason to do so. They prefer instead to migrate in the nearby Delaware, the river to which they were imprinted as newly hatched fry and fingerlings.

And the lift at the Conowingo Dam does work to a certain extent, but the river's run of shad is so depleted that in most years the number of fish that are caught there and trucked upriver is negligible in terms of offering a base for creating a new stock of Susquehanna shad.

But the Fish Commission hasn't been deterred by this barely marginal success. While negotiations are under way with Philadelphia Electric Company to provide improved passageway facilities at Conowingo Dam, the Commission has already joined with the Department of Environmental Resources to install a state-of-the-art fish ladder on the Samuel W. Frank Memorial Dam on the Lehigh River in

Allentown, and work is now in progress toward the installation of two more passageways on that river and at least one more on the Schuylkill.

In the meantime, the Commission has been annually stocking millions of juvenile shad in the Susquehanna, and for the first time in 1985 placed about 600,000 juveniles this year in the Lehigh River and some 251,000 in the Schuylkill River. Fingerling shad, originating from the spring fry stocking, were recovered in the Schuylkill by Commission biologists at Royersford in September 1985.

LRPPIF

Experimental work was done by the Fish Commission as early as 1973-76 to study the feasibility of shad restoration in the Lehigh River. This work included stocking 80,000 eggs at 10 sites from Glendon to White Haven, as well as water quality and aquatic invertebrate studies. In 1980-82, Area Fisheries Manager Craig Billingsley conducted additional social, physical, biological, and chemical inventories. Still, the restoration efforts haven't been limited to work by the Commission. In fact, the Lehigh's juvenile shad project was initiated in 1982 by the Lehigh River Preservation, Protection and Improvement Foundation (LRPPIF), a small but hard-working sportsmen's group headed by President Dave Chiles of Bethlehem.

The LRPPIF, which receives technical assistance from Fish Commission personnel and Joseph Miller of the Delaware River Basin Fish and Wildlife Management Cooperative, first transported adult shad and shad eggs from the Delaware to the Lehigh four years ago.

The adult shad were caught in May 1982 by members of the Delaware River Shad Fishermen's Association. The fish were placed in a large, home-made aerated transfer tank, and then trucked to the Lehigh, where they were released at the Tri-Boro Sportsmen's Club in Northampton. The several hundred thousand shad eggs the group obtained from the ripe Delaware fish were placed in 12 LRPPIF hatch boxes and set out at various locations in the river. In August 1983, the LRPPIF seined the Lehigh below Bethlehem and came up with several 3½-inch juvenile shad, the first in the river since the 1820s.

LRPPIF members have carried out similar adult and egg programs every year since, although river conditions hampered juvenile success until last summer, when more than 15 young shad were caught.

The group's work shows that the Lehigh is clean enough and contains sufficient food to support a shad population.

The LRPPIFs efforts are now aimed at convincing the Pennsylvania Senate to fund construction of passageways on Lehigh River dams at Easton and Glendon. The Senate will soon vote on a bill, H.B. 383, that has \$3.3 million earmarked for the two projects. H.B. 383 has already passed through the State House of Representatives and is part of a supplemental capital budget appropriations bill.

Should the bill meet with Senate approval, the door will be opened for migratory shad to enter the Lehigh once again, and restoration will be complete in at least one Pennsylvania river.

Leroy Young, a Fish Commission fisheries technician who has been monitoring the LRPPIF's work, is encouraged with the Lehigh's potential.

"I'm optimistic about the Lehigh," Young says. "Its water



quality is good enough right now for restoration. If shad can get through the Delaware in Philadelphia, they can get through the Lehigh. It's ready to go."

Young is also working on the Susquehanna's restoration project and is optimistic about its future, too.

Transfers and stocking

The restoration program on the Susquehanna River is a cooperative effort which, in addition to the Fish Commission, involves the Maryland Department of Natural Resources, New York Department of Environmental Conservation, Susquehanna River Basin Commission, U.S. Fish and Wildlife Service, and four private utility companies. The power companies provide most of the financial support for the program.

For the past five years, the Commission has been involved in transferring 3,000-5,000 adult shad to the Susquehanna from the Hudson and Connecticut rivers, and stocking them at Tunkhannock on the river's North Branch. An additional 800-970 adults were trucked upriver in 1982 and 1985 from the fish lift at Conowingo Dam.

Shad eggs for the Susquehanna River program are obtained from the Delaware, the James and Pamunkey rivers in Virginia, and the Columbia River in Oregon. They're stripped from ripe females, fertilized, and then taken to the Commission's Van Dyke Hatchery at Thompsontown on the Juniata River, and 18 days after hatching they're placed into the Juniata, which flows into the Susquehanna near Clarks Ferry.

Starting in 1985, the young fry were immersed in a bath containing oxytetracycline (OTC) before their release. This chemical becomes incorporated in the otolith, one of the fish's inner ear structures. When examined under ultraviolet light, OTC gives off a fluorescent glow. During autumn collection of juvenile shad migrating out of the river, biologists will be able to examine the fish and determine by the presence of the OTC whether they are of hatchery origin. If OTC isn't discovered, the shad may be progeny of a transplant from another river system or even from a fish trucked north from Conowingo.

A haul seine on the lower Lehigh River is pulled in. Two juvenile shad were caught in this haul, the first two of the 1985 year class stocked in the river. This activity took place in August 1985.

From studies such as this, the Commission hopes to determine a method of arriving at an index of abundance, so it can compare from year to year which stocking procedures result in the most fish moving downstream.

The juveniles that have been stocked in the Susquehanna, Lehigh, and Schuylkill will migrate out of the river systems in October and November, and will reach their respective estuaries by December.

Once out of the Delaware and Chesapeake bays, the juveniles will join up with schools of adult and pre-adult shad migrating south from their summer feeding grounds in the Bay of Fundy and Gulf of Maine. Three to six years later, they'll return to their home streams to spawn.

Whether the Susquehanna, Lehigh, and Schuylkill fish then gain access to the rivers is contingent on the progress that's been made on the streams' passageways. Still, progress can only occur if money is available, and a spirit of cooperativeness continues between the Fish Commission and the utilities maintaining the rivers' dams.

Dennis Scholl is a sportswriter for the Globe Times (Bethlehem, PA), and he is president of the Delaware River Shad Fisherman's Association. For information on this conservation organization, contact him at 501 Magnolia Road, Hellertown, PA 18055.

For their technical assistance with this manuscript, the author thanks the following: Robert Hesser, Fish Commission fishery resources biologist; Craig Billingsley and Mike Kaufmann, Fish Commission area fisheries managers; Leroy Young, fishery resources technician; Dick St. Pierre, Susquehanna River coordinator, U.S. Fish and Wildlife Service; and Joseph Miller, Delaware River coordinator, U.S. Fish and Wildlife Service.

Ice Angling with Small Fry by Joe Workosky photos by the author

"I wouldn't think of taking my kids ice fishing," the angler stated, "not until they're, say, 12 or 13. Heck, all they do is squirm and complain they're cold, hungry, or bored."

This fisherman was geared up for a full day of hard-water angling. He had a power auger, a bucket full of live minnows, a pile of tip-ups, and two fine jigging rods.

It was plain to see from the assortment of fish he had on the ice that this guy was proficient, but he failed to understand why his kids were squirming, complaining, and bored of ice fishing.

Maybe he was a bit too concerned with how many and how big his fish were, instead of how much enjoyment his children were getting. The sad thing is that by the time his children are 12 or 13, they may be far too interested in television winter sports to accompany their parents for a day on the ice.

To derive the fullest benefit from any outdoor activity, you should start your youngster early, and age five or six isn't too young for ice angling. But you must do some homework to ensure their success. Here are a few guidelines.

Where to fish

One of the most important ideas is always to fish in an area you've previously scouted and have taken fish in. It's equally important to pick your days carefully. Watch the weather reports the evening before your trip, and fish only when conditions are moderate.

There's nothing worse than spending a frigid day moving your gear and your family from place to place, hoping to luck into some action. Of course, the number of fish caught should not be the measure of a

successful day, but a few fish on the line does much to keep a youngster's interest up.

Also, stay away from the trophy trips. Sure, everyone would like to latch on to a husky musky, but a 10-inch perch is almost a sure thing and may get a little one hooked on ice fishing for good.

My children, Jenny and Julie, ages six and nine, both enjoy catching panfish on their own jigging rods. Small lead spoons have accounted for dozens of their fish, and they have developed confidence in their techniques.

Julie, however, used to hate to see me bait the tip-ups with big shiners. She thought that this was low-percentage fishing, and she was not interested in flag-watching. Her negative attitude was caused in part by my failure in picking good areas for larger gamefish.

This past winter, though, we used a line of tip-ups along with our jigging holes, and the combination worked well.

By experimenting with various areas, I found a spot where the pike like to cruise, and in one afternoon we caught and released 11 northerns in the 22-inch to 24-inch class. My girls were thrilled with racing to the tipups, and now this technique helps break up a day of constant jigging. Julie now also understands that patience plays a big part in being a successful ice angler.

Another reason scouting missions are so essential to a small fry ice excursion is that you will be hauling a large amount of gear. You won't want to move too often with the equipment suggestions that follow.

Equipment, clothing

Because keeping warm and dry is

vitally important, a good, sturdy seat is vital. I don't mean an upside-down bucket, which seems to be standard on most Pennsylvania lakes. We use full-size, lightweight, folding lawn chairs, even though we get our share of strange stares from other fishermen. I like them because they don't tip over easily and the kids won't slip off. We don't use the tiny camp stools, either. Dressed in bulky coats and pants it's hard for youngsters to get on and off these things.

Clothing is also a big factor in spending a comfortable day outdoors, and when you're on the ice, you really can't bring too much extra.

Gloves, hats, scarves and socks are items that definitely get soaked but can be changed without much trouble. Wet clothing must be monitored closely to avoid frostbite, and to help guard against it, bring along a jar of petroleum jelly. Applied to hands, nose, cheeks, and ears, this thin layer of insulation helps prevent frostbite and chapped, wind-burned skin on both adults and youngsters.

Keeping warm is the main objective for ice anglers, so a shelter of any kind can be a welcome addition to your gear. Whether it's just a tarp or plywood deflector or an actual ice shanty or tent, these enclosures extend the amount of time you and your family can spend on the ice.

During the past two seasons, we have been using a small tent, and in addition to the big benefit of blocking the wind, it also absorbs the sun's rays, making the interior 10 to 15 degrees warmer than the outside air.

Chow

Another consideration on cold days is warm food, and my kids love hot chocolate and hot dogs. A small



propane stove has become a top priority on our ice fishing list along with a kettle, frying pan, and more instant cocoa than you think you'll ever use. My two daughters go through this stuff like it's free.

This kind of food is fast and easy to prepare, and will fuel a body to deal with the cold temperatures. We've even brought along pre-cooked hamburgers, chili, and home fries, and these meals are often the highlight of the day.

To transport all this stuff, we use sturdy plastic toboggans, and when the fish don't bite, you can always use these sleds for their intended purpose.

Julie and Jenny each have their own lightweight toboggans, and on our trips they're expected to get them from the car to the ice and back. Each sled is loaded with a small duffle bag filled with their clothes, plus hand warmers, hot seats, snow shovels, and fishing equipment.

Aside from cutting holes and unhooking fish, they're expected to set up their own area, keep track of all their gear, and catch their own fish.

I usually set our tip-ups in a straight line perpendicular from shore with the jigging hole closest to shore. This set-up helps the kids, because a glance in one direction is all they need to check all their baits at once. This also allows the baits to be set in progressively deeper water. When

action regularly comes from one tipup, the others can then be set at similar depths.

My children now get a real kick out



of flag-watching, especially when eating, cooking, and warming up in the tent. It seems as if nothing much ever happens until one of them is settled comfortably in her chair, with food and drink in hand. It's always then that the flags start flying.



A full-size, lightweight folding lawn chair looks a little out of place on the ice, but it doesn't tip over easily. The kids won't slip off them, and children can be reasonably comfortable in them.

What Is an Area Fisheries Manager"?

by Richard A. Snyder

rea fisheries managers-who are they and what do they do? Within the Fisheries Management Section of the Pennsylvania Fish Commission there are seven fisheries biologists (with over 100 years of cumulative service) who are charged with the responsibility of managing the Commonwealth's fishery resources, which encompass thousands of miles of streams and rivers and hundreds of lakes. Each biologist is referred to as an area fisheries manager (AFM) and is assigned a fisheries technician who is often the "backbone" of an area office, contributing his technical expertise and service in assisting the AFM in managing the water resource.

Each AFM is responsible for the fisheries in an assigned region or area, often including several watersheds. Rather than differentiate fisheries areas on a county basis, especially because flowing waters do not necessarily ad-



Above left, AFM Mike Kaufmann samples a stream's water for analysis. Above, the author conducts a survey of trout.



AFM Blake Weirich uses a pH kit to test the water in his area.

here to county lines, major drainage basins and then subbasins are defined to delineate areas of responsibilities. For example, Fisheries Management Area 5, one of the easier defined areas, contains the Delaware River upstream of and including the Lehigh River and all tributaries therein. That takes in all or parts of 10 counties.

Such coverage is not unusual in Pennsylvania. In some states with larger conservation agencies but perhaps less independence due to receiving general tax monies, an AFM might have only one or two counties. Because Fish Commission management areas are so large, there is a good chance that the general angling public may have relatively little knowledge or contact with this group of Commission field employees.

The map shows the seven management areas and the headquarters for each area office. Attempts were made to locate the offices at other Commission facilities, especially where mechanical and electrical support services would be available. Three offices (Tionesta, Huntsdale, and Pleasant Gap) are located at Commission fish culture stations, and two others (Somerset and Sweet Valley) are located at regional law enforcement offices where Commission maintenance personnel are also headquartered. The remaining two offices are located by themselves, the Bushkill office in a building owned by the National Park Service near the Delaware River in Monroe County, and the Revere office in a building owned by the DER Bureau of State Parks in Nockamixon State Park, in Bucks County.

Ideally, the AFM, within the Commission's overall mission, monitors the well-being of fish populations, initiates action to provide for protection and enhancement of the resource, provides programs (stocking and regulations included) for varied and continued angling opportunity for Commonwealth anglers, evaluates results from previous recommendations and action, and informs the angling public and others who may in some way have an impact on the resource, of the quality and

quantity of the fisheries in the Commonwealth.

Routine field work might involve a stream survey collecting fish (via electrofishing), testing water with electronic meters and chemical solutions, and examining in the field and perhaps later microscopically in the office lab the invertebrate or stream bottom life collected by nets and by hand-picking rocks and instream vegetation. The size (width) of the stream would also be determined, as well as the degree of bank erosion, bankside vegetation, stream bottom composition, and shade over the stream channel. Then back at the office, perhaps after a visit to the county courthouse to review tax map ownership of the stream banks, ownership and accessibility can be determined.

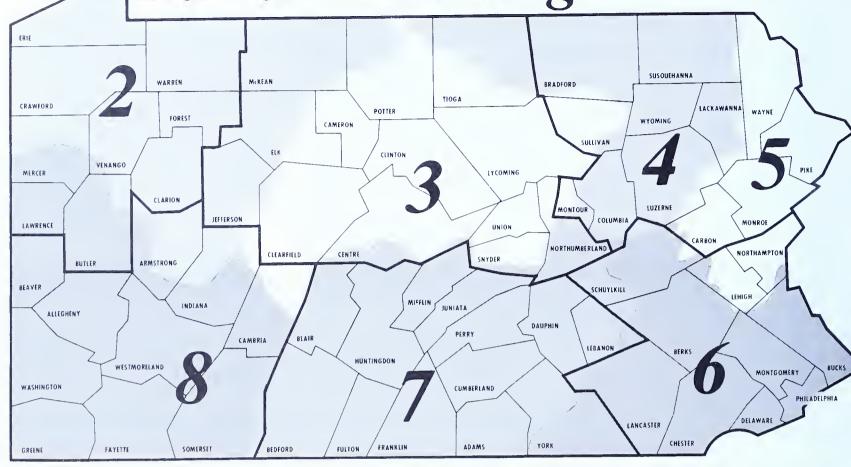
Monitoring water quality

Following such an examination on the lower reaches of Letort Spring Run at Carlisle, for example, the AFM determined that an improved sewage system was enabling the water quality to improve to the point where a trout fishery seemed possible. Following the survey, a recommendation was made to establish a trout fishery through stocking. Consideration of stocking catchable-sized trout was viewed as unwise because of the immediate angling pressure often following such management and that access was restricted (mostly major highways) along the stream. Rather; maintenance stockings of fingerlings were recommended, and



AFM Bruce Hollender and Fisheries Technician Robert E. Wilberding survey a stream in their area.

Fisheries Manager Areas



Pennsylvania Fish Commission Area Fisheries Managers

Area 2: Ronald Lee, Box 1, Route 2, Tionesta, PA 16353.

Area 3: Bruce A. Hollender, 450 Robinson Lane, Bellefonte, PA 16823-9616.

Area 4: David W. Daniels, Box 88 Sweet Valley, PA 18656.

Area 5: Craig W. Billingsley, PA Fish Commission, Bushkill, PA 18324.

Area 6: Michael L. Kaufmann, Box 556, Revere, PA 18953.

Area 7: Lawrence L. Jackson, RD 5, Box 393, Carlisle, PA 17013.

Area 8: Blake C. Weirich, RD 2, Box 39, Somerset, PA 15501-9311.

photos by Russ Gettig



AFM Ron Lee surveys a lake-run steelhead at Presque Isle Bay's Niagara Access ramp.

some 3,000 fall-stocked fingerling brown trout were stocked.

According to follow-up electrofishing and reports from area anglers, the maintenance stocking of fingerlings is providing a worthy recreational angling program for the area.

Special regulations program started

In Washington County, for new Cross Creek Lake, the AFM initiated a stocking program to provide for a largemouth bass and sunfish population, which, with the excellent habitat and fertility, should provide a fine sport fishery. The potential for a really good fishery encouraged the AFM to develop special regulations (high size limit on the bass and reduced creel limit on the panfish) to give anglers a fishing spot offering more than the average often found where conventional regulations are imposed. The project also included an angler survey the first year to monitor catches and to access angler attitudes toward such management.

Tending nets at night

Diagonally across the state, an AFM and crew spent several spring nights tending nets in the Delaware River during the shad run. By the light of gas lanterns, netted shad were then spawned, with the eggs (some 6 million) being transported to a Commission fish culture station. Resulting fry and fingerling shad were then stocked as part of the Commission's shad restoration effort in the Schuylkill, Lehigh, and Susquehanna rivers.

Reviewing proposals

Another AFM, involved in the review of a proposal for rebuilding a dam on a small trout-stocked stream in Chester County, studied the merits of maintaining a free-flowing stream, weighing pros and cons of re-establishing a small lake fishery on a stream in a watershed prone to experiencing considerable siltation. The projection of the quality and quantity offered by both types of fisheries was considered.

One of the unpleasant but necessary aspects of the AFM's job is to participate in the investigation of fish kills and the legal proceedings that follow. Obviously, we would prefer that such incidents don't occur, but when they do, the investigation can become equally frustrating.

Sharing information

On the other side of the coin, welcomed activities sometimes include attending sportsmen's meetings or shows where information can be shared with fellow anglers. Having fishermen accompany an electrofishing crew often results in someone shaking his head and saying, "I had no idea that so many stocked trout were left in the stream two months after opening day."

Imagine the desire of an area fisheries manager to show anglers nice fish on a recent electrofishing of French Creek in northwestern Pennsylvania when no one was around to see four muskellunge (two legal-sized ones), a walleye weighing over 11 pounds (33 inches), five northern pike (one of 30 inches), and several smallmouth bass (one over 17 inches long)—all taken in a short stretch of stream!

Gathering data

All AFMs spend considerable time collecting information on the social, chemical, physical, thermal, and biological components of every stream section stocked with catchable-sized trout. The resulting information, representing over 5,000 miles of flowing water, took seven years of field work and is now used (with updates) in the trout stream classification system. The information is constantly referenced by the AFMs to determine positions and courses of action for numerous environmental activities, such as mining, bridge construction, pipeline routing, and other encroachments.

Other specific activities for an AFM in a busy week might include electrofishing and chemical analysis of data relevant to the fish population, advising a homeowner of the legalities involved in treating (herbiciding) a farm pond for weeds, formulating a television program on a stream survey, and testifying before a joint legislative committee regarding the effects of acid precipitation.

Knowledge gained from formal course work, plus that gained through years of experience, is put to good use. Textbook information is useful, but many things, such as how to mend a gill net or field repairs of electrofishing generators and outboard motors, are learned on the job.

Even after a week of trapnetting and electrofishing, and handling sometimes thousands of fish, several of the group

think nothing of grabbing their personal fishing gear and heading for some favorite spot. After all, having an interest in fishing contributed to their pursuing a career in conservation. Depending on the fisheries in their respective areas, some pursue a variety of fishes. One enjoys spring shad fishing with occasional trips for panfish and walleye, another is an avid brook trout flathead catfish angler (talk about a unique combination!), and a third is learning to be a successful striped bass angler at Raystown Lake. The important aspect is that, like the worker in an automobile factory, an AFM has the opportunity to "test the water" on a fishery he may be managing.

Cooperating with others

AFMs also interact with representatives of a host of agencies at the federal, state, county, and local levels to see that activities by these groups are in harmony with the resource. The AFM might be involved with other Commission personnel, representing engineering, boating, hatchery, cooperative nursery, law enforcement, habitat improvement, administrative, and information efforts regarding fisheries in his area.

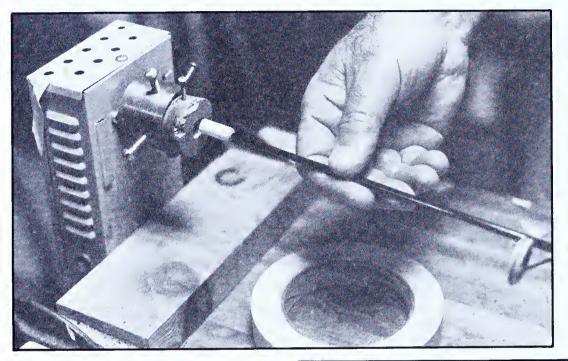
Answering inquiries

Considerable time is spent answering phone and mail inquiries from the general public. Topics range from how to identify a strange-looking fish washed up on the shores of Harvey's Lake (it turned out to be a dead shark illegally discarded from someone's recent deepsea trip) to "tell me everything there is to know about fishes in the Susquehanna River," to, "when are you stocking stream X?"

The chicken and roast beef banquet circuit involves the AFM and is another way contact with the angling public is fostered. Some have programs with college and universities for utilizing students in an intern program in which the student actively works in a fisheries setting while earning college credits at little or no cost to the Commission.

All in all, Pennsylvania's seven AFMs are biologists whose varied work contributes much to the goals of the Fish Commission.

Richard A. Snyder is chief of the Commission Fisheries Management Section in the Division of Fisheries. He supervises the area fisheries managers.



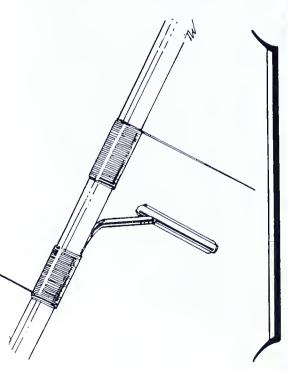
BY SAM EVERETT

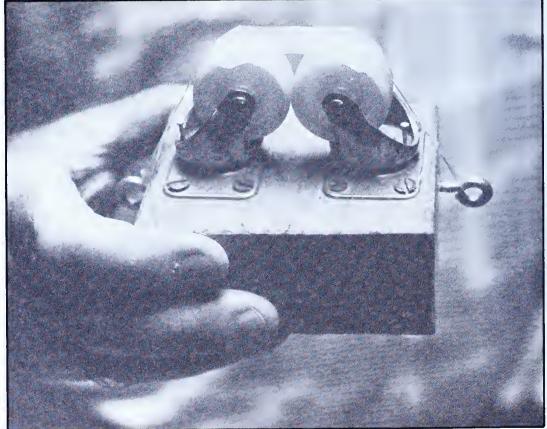
photos by the author

anding a big fish with a home-made custom-built rod is a greatly satisfying venture, and one part of this experience is wrapping the guides and applying finish to the rod. Here's how to build an inexpensive device that easily lets you wrap the rod guides and apply a professional-looking finish every time. You could also use this setup for repairing a rod's guides.

The device consists of two parts: a rotisserie motor that's specially adapted and a block steadier that lets the rod blank turn smoothly and evenly.

1. The rotisserie motor attached to the end of the workbench. Tape the rod blank end with masking tape to protect it and to hold it better in the cork.



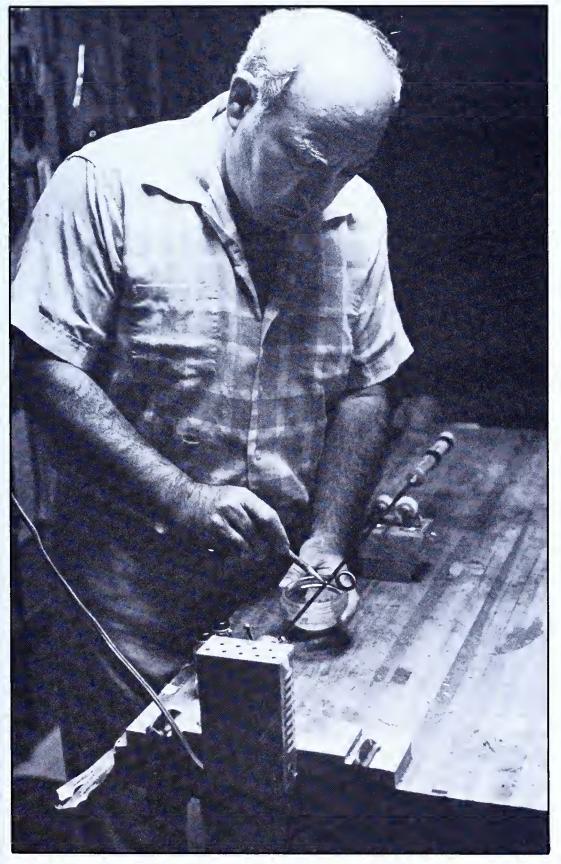


2. Here's the device for steadying the rod blank while it turns. Two one-inch wheels are mounted on a piece of 2x4, and the plastic cut from a six-pack holder keeps the rod gently in place.

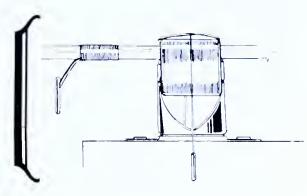
Set up the rotisserie motor first. You'll need to use one from an old rotisserie or from a grill with a rotisserie attachment, because finding just a rotisserie motor is difficult. When you get one, check its speed to determine its usefulness. One that makes a revolution in about 10 seconds works fine, but if you're not yet a skilled rod wrapper, find a rotisserie motor that moves

slower, closer to 14 seconds per revolution, a gadget-minded friend may be able to slow a fast rotisserie motor for you, so look into this prospect if your motor is too quick.

Another alternative with a fast motor, especially if you find them hard to get, is practicing so that you master the rod wrapping techniques with greater speed and dexterity.



3. Here's the whole thing in operation. Apply glue to the rod wrappings with a quarter-inch dowel that's been honed in a pencil sharpener.



Mount the motor on the end of a rock-steady workbench. You'll need a foot-long 1x3 furring strip. Bolt the motor to the wood, and attach it securely to the workbench with two 4-inch C-clamps. I beveled off the ends of the furring strips to set the C-clamps lower. This step is optional. In this way, when you need your workbench for other things, you can easily remove the device and re-attach it.

I also fitted the turning part of the rotisserie motor with a 1½-inch diameter hood in which I mounted four one-inch size 8 bolts. These bolts hold a cork in which I place the rod blank. I wrap the blank with masking tape to protect it and to ensure a steady fit while I work on it (see photo 1).

I use the rotisserie motor in combination with a holder that keeps the other end of the rod blank steady. Start with a 3-inch or 4-inch 2x4, and drill a halfinch hole through the middle, but don't drill completely through the middle to the other side. Then pour molten lead in the hole, let it cool, and seal the end with plastic wood compound. This weight steadies the holder. On top, mount two movable wheels, like those you'd buy for light tables and benches.

One-inch diameter wheels are fine. Screw them to the wood, but use finishing nails to brace the wheels in one position. Mount the wheels so that they just barely touch, and be sure to line them up evenly. On both sides of the block, screw one-inch eye bolts. To hold the rod blank firmly on the support, but also to let it turn freely, I use a piece of plastic cut from a six-pack holder, and I attach it to the wheels with 12-pound-test mono (see photo 2).

Photo 3 shows the device in operation. I can wrap guides on just about any rod blank with this setup. I simply let the rotisserie turn the rod until the glue is dry. It uses hardly any electricity, and because the rod is moving constantly, the wrap is smooth as can be.



County Features Carbon and Monroe Counties

by Andrew Toms

arbon and Monroe counties are located in the heart of the Pocono Mountains and provide a varied, year-round fishery that includes brown, brook, rainbow and lake trout, largemouth and smallmouth bass, American shad, muskellunge, chain and redfin pickerel, channel and white catfish, walleye, perch and panfish.

Monroe County

Brodhead Creek

Many angling historians consider the Brodhead to be the cradle of American fly fishing. Originally called the Analomink by Delaware Indians who inhabited the Pocono region, the stream was renamed in the 1730s after Captain Daniel Brodhead, a settler who purchased 1,500 acres in the Analomink Valley from the sons of William Penn.

Twin hurricanes Connie and Diane dumped more than 14 inches of rain on eastern Pennsylvania in 1955 and completely changed the nature of the Brodhead and many other Monroe County streams. Aquatic life all but disappeared from the Brodhead for several years, stream channels were altered, and the creek was widened and rechanneled in the town of Stroudsburg, where flood damage was considerable.

The Brodhead has rebounded during the last three decades, and fishing has improved, although the best section of the stream is under private ownership. Fishing above Analomink is strictly limited to members of various rod and gun clubs. Below Analomink, the Brodhead is open to public fishing for approximately 8½ miles. Although there is not one particular road that parallels the stream, access to the Brodhead can be gained by following

Route 191 north out of Stroudsburg.

The Brodhead's public waters are relatively fast-flowing and contain a diverse aquatic life with mayflies, stoneflies, and caddises all present. Brown and rainbow trout are annually stocked by the Fish Commission, and fishing is best from the beginning of the season through May and again from mid-September through February. A lot of trout are taken during the winter.

Bait fishing with fathead minnows is particularly effective, although worms and spinners also produce. Fly hatches are sporadic. The Brodhead is not considered to be good trout water below Stroudsburg because of effluents released from three sewage treatment facilities that raise water temperatures. The Brodhead empties into the Delaware River about two miles below Stroudsburg. Standard trout fishing tackle and ultralight gear is good here.

Bushkill Creek

Originating in Pecks Pond in Pike County, the Bushkill flows southeast into Monroe County before entering the Delaware River at the hamlet of Bushkill.

Undoubtedly one of the most aesthetic streams in eastern Pennsylvania, the Bushkill flows through forests of hemlock and pine and contains many good pools and swift runs.

There are two 6-mile sections of the stream open to public fishing. One is located north of Resica Falls, a picturesque cascade of water located on a large tract of land owned by the Boy Scouts of America. Resica Falls is located along Route 402, approximately 8 miles north of Marshalls Creek.

Fishing in the six-mile stretch above the falls is limited to fly fishing only. From opening day, try Mickey Finns, Muddler Minnows, and black-nose daces. Wets are also good. A black stonefly, light Hendrickson, Hare's Ear, and blue Quill in sizes 12-14 (try the blue Quill in size 16) are good bets. Fishing is not permitted 200 yards above or below the falls.

The other six-mile portion of the Bushkill can be reached by taking Route 209 north out of Marshalls Creek. You can pick up the stream at Bushkill and follow its meandering course on local roads.

The Bushkill is strictly a seasonal trout stream. When summer arrives, the creek's trout enter cooler tributaries or migrate downstream to the deeper Delaware River. Rock bass, eels, and redbreast sunfish become the main fare in the lower Bushkill during June, July, and August.

The best trout baits are fathead minnows and worms. A variety of stoneflies, mayflies, and caddises are present, as well as a good population of hellgrammites. Fly fishing is popular on the Bushkill's lower and upper stretches in the spring and fall.

McMichael's Creek

Relatively wide and not particularly fast, McMichael's Creek is open to public fishing from Sciota to Stroudsburg, where it empties into the Brodhead under the Interstate 80 bridge. Much of the stocked portion of the stream is not paralleled by roads, but access can be gained from Route 209 at Sciota or Route 33 at Snydersville. The creek above Sciota is mostly under private ownership.

Thanks to a fair amount of aquatic life and good water conditions, some natural reproduction of brown trout takes place in the McMichael's, but the majority of fish caught there are the result of pre-season and in-season stockings.

A variety of baits and lures works on the McMichael's, but the most popular trio is salmon eggs, worms, and spinners, particularly Mepps, Rooster Tails, CP Swings,



American shad are available in the Delaware River every spring. These superb light-tackle battlers offer a unique brand of fishing.

and Flicker spinners. The best times of the year for fishing are spring and fall.

Pocono Creek

Originating in the forests of Camelback Ski Resort, Pocono Creek flows southeast toward Stroudsburg and contains excellent trout fishing in certain locations. Although it is stocked only in the vicinity of Stroudsburg, the Pocono contains wild brown and brook trout populations around Tannersville. Access to the stream, which flows into McMichael's Creek in Stroudsburg, can be gained along routes 715 and 611.

Good fishing is available right behind Stroudsburg High School, where the stream harbors surprisingly good mayfly populations. The high school lot can be used for parking. Fishing is best in the spring, but fall angling also produces good catches of brown trout. Worms, minnows, and spinners are good bets, as well as salmon eggs and flies.

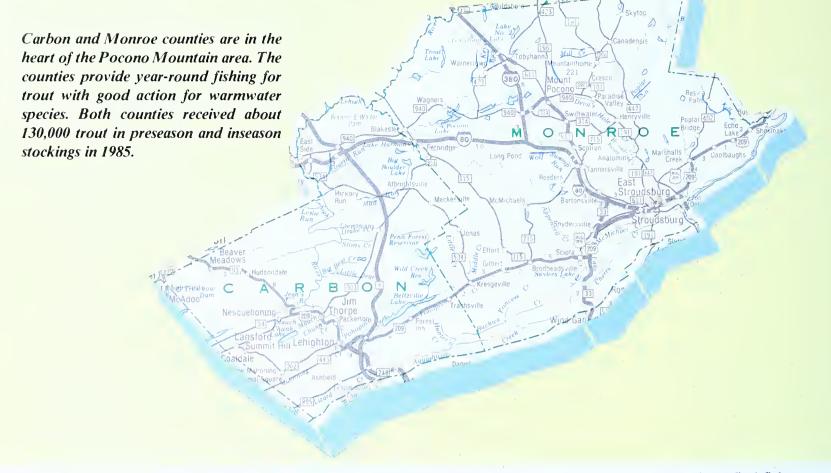
Pohopoco Creek

The Pohopoco originates in the forests of Monroe County but follows a westerly course before entering Beltzville Lake in Carbon County.

Although it is strictly a trout water north of the lake, below the impoundment, the Pohopoco contains walleye,

Monroe and Carbon counties offer several waterways with

Monroe and Carbon counties offer several waterways with special regulations that provide special trout fishing experiences. Consult the 1986 Summary of Fishing Regulations and Laws for the location of these places, beginning on page 14.



channel catfish, smallmouth bass, and an occasional tiger muskellunge, as well as brown and rainbow trout stocked by the Fish Commission. The "oddball" species in the Pohopoco are the results of water releases from Beltzville Lake.

The portion of the stream above Beltzville Lake is managed as wild trout water at landowner request. An excellent variety of aquatic life is present there. This portion of the Pohopoco can be reached by following Route 209 north out of Kresgeville. Route 209 also crosses the creek just east of Gilbert. The flow in this section of stream is moderate.

Below Beltzville Dam, the Pohopoco picks up speed below entering the Lehigh River near Lehighton. Because this portion is regulated by water releases from the dam, cooler water temperatures can be maintained, and as a result, the Pohopoco supports a good year-round trout fishery. A lot of large brown trout are annually caught in this section. Twenty-inch fish, some of which have come out of Beltzville Lake, are not uncommon.

Bait fishing is the best bet in the Pohopoco's lower stretch, with minnows and worms accounting for most of the fish that are caught. The upper section of the creek, above Beltzville, is excellent for fly fishing.

Tobyhanna Creek

Six miles of this beautiful stream are open to public fishing, from its source in Tobyhanna Lake to Gamelands 127. The creek is accessible by following Route 423 southwest of Tobyhanna.

Tobyhanna Creek is larger than most freestone streams in the county, but it does not support trout on a year-round basis. When warm weather arrives, the creek's trout head for smaller tributaries like Frame Cabin Run and Kistler Run, where excellent aquatic life affords good fly fishing.

In the spring, fall, and winter, however, Tobyhanna Creek offers top-notch trout angling, particuarly in

Gamelands 127 where anglers must walk in to find fish.

The last mile of stocked water is under delayed-harvest regulations and is posted as such. Anglers should check the summary of regulations and laws for all the particular rules. There is a good brook trout population in Tobyhanna Creek, so a variety of lures can be used to catch fish, including minnows, salmon eggs, worms, and spinners. Artificial-lures-only is the rule in the delayed-harvest section.

Delaware River

The Monroe County portion of this top-notch waterway begins at Bushkill and ends at the Delaware Water Gap, a distance of some 15 river miles.

By far the most popular type of angling in the Delaware is shad fishing, which usually begins in Monroe County in the last week of April and continues through June when the fish are spawning in many of the river's pools and riffles.

Shad fishing reaches its peak in Monroe County around the 10th of May, but good fishing can be enjoyed until the end of the month, when the shad begin to enter their spawning stage.

There is one public boat launch in the county, located about three miles north of Shawnee-on-the-Delaware at Smithfield Beach. A large site, Smithfield Beach is fully equipped with bath houses, picnic areas, a swimming beach, and a two-lane launch ramp. There is parking available for more than 100 cars. The site is maintained by the Department of the Interior as part of the Delaware Water Gap National Recreation Area.

Shad fishing is best between daybreak and 10 a.m., and again from 3 p.m. until dusk. But when the fish are migrating, they can really be caught at any time of the day. During their spawning period, however, the best fishing is in the late afternoon and very early morning.

To catch shad, try shad darts of any color combination or small spinners such as CP Swings and Flicker Spinners.

Gold is a must when choosing the blade color.

The Delaware is also home to many other species, including walleye, muskellunge, smallmouth bass, channel catfish, eels, white catfish, carp, white suckers, and trout.

The Fish Commission stocked 1.2 million walleye fry in Monroe County waters of the Delaware in 1984 (60 million in the river overall) and the results should begin to show up in another year or so. There are already walleye in the river, but they have proven to be difficult to catch. The deep pool at the Water Gap has produced 9-pound specimens in recent years, and Wallpack Bend also yields an occasional trophy catch.

By and large, walleye are a tough number in the river. The best times of the year to try for them is spring and also fall and winter. Juvenile lamprey eels and stonecats are the top two baits, but nightcrawlers and live shiners work well, too. Jigs and trolled Rapalas are good artificials.

Musky fishing is best in the winter, when only the true die-hard attempts to navigate the Delaware's icy waters. The general area above and below Smithfield Beach has produced some 50-inch specimens in recent years, and the stretch at the Water Gap has also yielded a few monsters. The best baits are large shiners, creek chubs, or suckers.

Artificial lures include large Rapalas, Rebels, or Swim Whizzes. Inadvertently, a few muskies also fall prey to shad darts during the shad season.

Smallmouth bass fishing is best in the river's faster stretches, particularly in eddies on the flanks or rapids. No particular spot holds more smallmouth than another, although a good number of fish are annually taken in the fast water below Wallpack Bend.

Trout can be caught in the spring below the mouth of Bushkill Creek and also at the mouths of other tributaries like the Brodhead. With the advent of warmer weather, however, the trout seek the coolness of the tributaries or find deeper holes in the river. Trout fishing is not one of the river's biggest attributes in Monroe County.

Catfishing begins in late March and early April, takes a break when the river warms up in the summer, and picks up again in the fall. One of the best spots is at the point of the Water Gap, almost in line with a lookout marker located along Route 611. The best baits for the river's channel and white cats are stink baits and live minnows.

Brady's Lake

Brady's Lake lies 2½ miles off Route 940 between Blakeslee and Mt. Pocono. The 229-acre lake averages six feet in depth although there are dropoffs that go down to 15 feet. No one species dominates the fishing there, but more largemouth bass are probably caught than any other fish. Yellow perch, pickerel, and black crappies are other available species. This lake was one of the first in Pennsylvania to be stocked with tiger muskellunge, although very few are caught.

The lake's water is naturally tannic. Only electric motors are permitted.

Gouldsboro Lake

Located in Gouldsboro State Park, Gouldsboro Lake is home to largemouth bass, chain pickerel, yellow perch, bluegills, black crappies, and bullheads. The lake is owned by the Fish Commission but leased to the Department of

Environmental Resources, which maintains a boat launch. swimming beach, and picnic area.

Gouldsboro Lake is scheduled to be drawn down during the upcoming summer in order that DER can repair the dam spillway and its boat mooring facility. Launching a boat may be difficult. Electric motors only are permitted on Gouldsboro Lake.

Gouldsboro Lake can be reached by taking the Route 507 north exit off Route 380. Proceed to the village of Gouldsboro and look for signs to the state park.

Snow Hill Dam

Snow Hill Dam can be reached by following Route 447 north out of Stroudsburg until you reach Snow Hill Dam Road, which you follow until you see signs directing you to the 4-acre impoundment. This Delaware State Forest Lake is stocked annually with brook trout, which can be caught with spinners, corn, salmon eggs, worms, and cheese. Snow Hill Dam also contains populations of pickerel and pumpkinseeds. A picnic area is available for family outings.

Carbon County

Aquashicola Creek

The Aquashicola originates in Monroe County and flows west along the Blue Ridge Mountains before entering Carbon County. It does not parallel any road until it crosses underneath Route 248 several miles south of Lehighton. It empties into the Lehigh River at Palmerton.

The Aquashicola is an excellent trout stream and harbors many large trout from its confluence with Buckwha Creek, southwest of Little Gap, to its headwaters. Fishing along the stream is very difficult, however, because of dense vegetation on both banks.

Because its bed is composed mostly of sand and gravel, the Aquashicola contains a diverse population of aquatic life, which in turn supports a healthy stock of wild brown trout. Mayflies, stoneflies, caddises, midges, and mosquitoes are all present. Lots of blacknose dace also dwell in the stream.

Although trout fishing is good year-round, the best times are spring and fall. The Aquashicola receives only a preseason trout stocking. Redfin pickerel also inhabit the Aquashicola, which is not a wide stream but is deceivingly deep at spots.

If you're looking for good fly fishing, this is the place to go, but bait and hardware fishermen can also work their magic here, too.

Buckwha Creek

The Buckwha Creek originates at Saylorsburg, near the Carbon-Monroe County border, and flows through Kunkletown before meeting the Aquashicola.

Buckwha Creek receives pre-season and in-season stockings of brown trout and supports some natural reproduction. If water temperatures were lower during the summer, Buckwha Creek would be a good year-round fishery. As it is, however, the stream is good for trout only in the spring, fall and winter. Mayflies, stoneflies, and caddises are present, but fishermen would do best to try traditional trout baits and spinners.

Lizard Creek

A freestone stream like all others in Carbon County, Lizard Creek rises in the foothills of the Blue Mountains and flows east to the Lehigh River, which it enters at Bowmans. It parallels Route 895 for most of its length.

Lizard Creek is strictly a stocked trout water, receiving both pre-season and in-season allotments of fish. Like Buckwha Creek, Lizard Creek supports some mayflies, stoneflies, and caddises, but fly fishing takes a backseat to the use of bait and spinners.

Mahoning Creek

This stream is very similar in nature to Lizard Creek. It flows just north of Lizard Creek along Route 443 and empties into the Lehigh River south of Lehighton. It receives pre-season and in-season stockings and is best fished with live bait and artificial lures, particularly spinners.

Hickory Run

Located in Hickory Run State Park in the county's northern tier, Hickory Run originates in the park's vast boulder field, flows into and out of Hickory Run Lake, and continues on a southwest course until it meets Sand Spring Run and becomes somewhat larger.

The upper section of the stream has a low pH and is not conducive to trout fishing. But below Sand Spring, the creek begins to acquire a certain degree of alkalinity and trout become abundant. There is a 1.5-mile catch-and-release section located below the state park office that is restricted to the use of flies and artificial lures. Rubber worms and live bait are not permitted.

Part of Hickory Run isn't stocked by the Commission but is rather managed as a wild trout stream under Operation FUTURE. It is a fast stream with a very steep gradient. Minnows are not abundant although there are some black dace present. Mayflies and caddisflies comprise the majority of the creek's aquatic life.

Two other streams located near and in Hickory Run State Park that are worth mentioning are Hayes Creek, which supports a good wild brown trout fishery, and Hawk Run, a tiny, crystal-clear creek that holds surprising numbers of native brook trout. Hayes Creek is located just south of Lehigh Tannery while Hawk Run is in the confines of the state park.

Lehigh River

The Lehigh's headwaters are located north of Carbon County, but a good portion of the river flows through the county's mid-section.

Flowing out of Francis E. Walter Dam on the Carbon-Luzerne County border, the Lehigh is a swift, wide stream that is stocked with brown, brook, and rainbow trout. The river's water quality is very good until it meets downstream with Nesquehoning Creek, which carries (coal) mine acid into the Lehigh. The water quality improves somewhat in the vicinity of Jim Thorpe, where the Lehigh supports populations of rock bass and redbreast sunfish.

Rafting and canoeing are very popular along the river, and the U.S. Army Corps of Engineers cooperates with recreationists by staging occasional water releases from Walter Dam. The Fish Commission has initiated a brown

trout fingerling program in the river, but surveys indicate that the results are as yet inconclusive.

Most of the river between Walter Dam and Nesquehoning is inaccessible by car. But it can be reached by taking the Route 534 south exit off Interstate 80. Follow the road to Lehigh Tannery, where you can gain access to the river.

Trout fishing on the Lehigh is a well-kept secret. But anglers can usually pry open the mouths of tackle shop owners in the area if they press the issue.

Beltzville Lake

The best days for this 947-acre lake may still be ahead, although it has already provided some top-drawer fishing since it was created in 1970.

With depths of up to 120 feet, Beltzville Lake was stocked in 1985 with 55,000 brown and rainbow trout fingerlings as well as 12,000 lake trout fingerlings. Toss in an additional 6,000 adult rainbow trout and 3,000 musky fingerlings, and mix in the lake's already present walleye, largemouth and smallmouth bass, yellow perch, and channel catfish populations, and you've got a pretty good fishery.

Trophy-sized brown trout have been caught there for several years by anglers employing downriggers equipped with lures that resemble alewives that are said to inhabit the lake.

Walleye up to 8 pounds are caught there on occasion, and a 53-inch tiger muskellunge was discovered two years ago after it had died and washed up on the lake's shoreline. Beltzville Lake has great potential.

Fed by three streams—Pohopoco Creek, Wild Creek, and Pine Run—the impoundment can be reached by following Route 209 east out of Lehighton. The lake has two boat ramps, Preachers Camp and Pine Run, and is open to craft with unlimited horsepower. The lower end of the lake, near the dam breast, is where most of the trout and smallmouth bass are caught, but there is also good trout fishing at Pine Run Cove. Trolling at depths of 40-60 feet in the summer and 20 feet in the fall seems to be the key to catching trout. The walleye are tough to find, as are the muskies, but they are there. Big channel catfish are caught in the middle portions of the lake on stink baits and live minnows.

Beltzville Lake also offers excellent ice fishing, although it is one of the last lakes in the area to freeze because of its great depths. The Preachers Camp area and the section of the lake underneath the power lines are good places to chop a few holes.

Mauch Chunk Lake

A narrow, 330-acre body of water, Mauch Chunk Lake is owned by the Fish Commission but operated as a county park. Facilities include a boat livery, picnic area and two launch ramps. The main fare at Mauch Chunk is walleye, although the lake harbors a fair largemouth bass population and also produces some nice channel cats. Trout are stocked for the winter season only. Mauch Chunk Lake offers good ice fishing for all species.

A popular lake, Mauch Chunk is located near the towns of Lansford, Summit Hill, Lehighton, and Nesquehoning. It can be reached by following Lentz Trail Road west out of Jim Thorpe.

SAVING A SPACE FOR WILDLIFE

A Special One-Day Conference

Saturday, May 3, 1986 — 8-4:30

Sponsored locally by Millersville University, Millersville, Pennsylvania Co-Sponsored By:

• Pennsylvania Fish Commission

• Pennsylvania Wildlife Federation • Pennsylvania Game Commission

Woodstream Corporation

The conference is aimed at helping Pennsylvania sportsmen, farmers, legislators, businesspeople, and other outdoor-oriented citizens who are concerned about the impacts of encroachment of fish and wildlife habitat. Workshops cover what can be done to mitigate these effects and even improve and increase habitat.

Fish and wildlife experts will detail what we know about habitat: its preservation and enhancement, clarifying technical issues into terms which can be understood by all.

This is your opportunity to ask questions about these vanishing living spaces and to learn what you can do to develop and reclaim them.

Dr. Jay Hair of the National Wildlife Federation will be our morning keynote speaker. Following his address there will be a panel discussion on habitat from the public, governmental, sportsmen, agricultural, and industrial perspectives.

The Millersville University staff will be preparing a buffet luncheon and two coffee breaks, which are included as part

of the \$10 registration fee.

Four simultaneous workshops during the afternoon will explore wildlife habitat from the perspectives of "Wildlife in Your Backyard," which will encompass backyard habitat, small pond management, and bird feeding; "Important Spaces for Wildlife," which will deal with woodland, wetland, and farmland habitat; "Operation FUTURE: Fishery Management," which will focus on coldwater and warmwater/coolwater fisheries, and shad restoration in Pennsylvania rivers; "Effects of Toxic Contaminants and Diseases on Fish and Wildlife," will address the problems of rabies, acid rain, and toxicants.

Dr. Maurice K. Goddard, former Secretary of the Department of Environmental Resources, will sum up the day's activities and focus attention on what we can do to preserve habitat.

Register today!

FILL OUT AND RETURN TO:

Pennsylvania Wildlife Federation, 2426 North Second Street, Harrisburg, PA 17110

NAME				
ADDRESS	ZIP CODE			
HOME PHONE	BUSINESS PHONE			
I want to attend the following workshop: (Choose only one because they occur simultaneously.)				
Backyard Wildlife	Important Spaces for Wildlife			
Fishery Habitat	Toxics and Diseases			

A map, conference materials and suggested overnight accommodations will be mailed to you on registration.

Commissioner Green Receives Award

The Pennsylvania Forestry
Association has presented
Commissioner Leonard A. Green the
prestigious Dr. Joseph T. Rothrock
Conservation Award. It is the
Association's highest honor, given for
outstanding accomplishments in
conservation.

Association Executive Director Bob Clark said that Green has worked over the past 25 years to build a series of county youth organizations throughout Pennsylvania.

"The Plaque reads, in part, 'For outstanding dedication . . .' to conservation, but Lenny's activism in support of a statewide program of youth conservation education and his concern with young people seem to stick in everyone's mind," said Clark.

Green, who has been National

Wildlife Federation's Eastern Region Vice President since 1983, served as the Pennsylvania Forestry Association president between 1979 and 1981. He has been cited by the Pennsylvania House of Representatives for his many contributions to the state.

Green said he is especially delighted to receive the Dr. Rothrock Award, named in honor of the man who founded the Pennsylvania Forestry Association 99 years ago and who was the state's most respected forester.

Anglers W San Eilerett

To keep your feet warm during ice fishing excursions, wear insulated, waterproof rubber boots over two pairs of wool socks. These boots keep you warmer than insulated leather boots, even for hours in sub-zero weather.

When you venture out during the winter, be sure you keep emergency gear such as sand, chains, and a snow shovel in your car, and be sure you have a full tank of gas before you begin your trek.

Going to a sport show? Lugging around a stack of materials at a sport show without a convenient way to carry them can tire you quickly, so remember to bring a daypack or some other item in which to store catalogs, free items, and product descriptions.

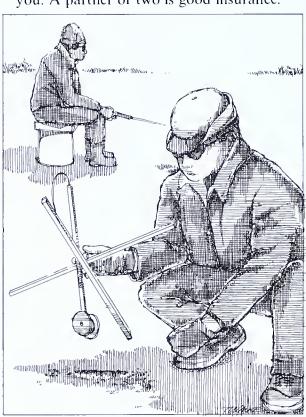
When you retrieve a sinking plug, alternate reeling in fast and then slowly. This makes the lure swim enticingly up and then slightly down during the retrieve.

Look over your favorite ice-locked waterway for signs of open-water sections. These spots often reveal the location of springs. During the hottest part of summer, these areas can hold the biggest fish because the water there will be cool.

Now is the perfect time to brush up on your boating skills and learn new ones. Look for boating courses offered in your area by the U.S. Coast Guard Auxiliary, the U.S. Power Squadrons, and the American Red Cross, and enroll.

Be sure to check your boat and trailer regularly during the winter. Make sure that your boat cover is secure, and that snow and ice aren't getting into places where they'll cause rust or other damage.

Always go ice fishing with at least one companion. Solo ice fishing is just too dangerous because a nasty fall on the ice, falling in, or car trouble, combined with frigid temperatures, can seriously endanger you. A partner or two is good insurance.



The best bait for catching crappies through the ice is a minnow of one inch to 1½ inches.

ıllustration — Ted Walke



Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities

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Regulation Roundup

by Dennis T. Guise

Most regulations considered by the Fish Commission are routine. They engender little or no public comment or interest. However, from time to time, the Commission considers regulations that it believes may stir considerable public interest. In those cases, the Commission makes extra efforts to garner public input and ideas.

Commission staff is currently examining whether the Commission should consider regulatory changes on fishing tournaments and contests. This process is in its earliest stages, but already the Commission staff is seeking input from interested groups and individuals about regulations that might take effect in 1987 or later.

Fishing tournaments and contests take many forms. One that has gained popularity in recent years is the tagged fish contest. In such an event, an angler pays an entrance fee to participate in an effort to catch a tagged fish. If the

tagged fish is caught, the participant may win a major prize, often, the sponsors procure an insurance policy to pay the prize if the tagged fish is caught.

Tagged fish contests may already be illegal in Pennsylvania. They have all the elements of a lottery or game of chance. Success is determined by the luck of the participant rather than skill. The Department of Environmental Resources has reportedly barred such contests on state park lakes. One regulation to be considered by the Commission would ban tagged fish contests on Fish Commission property.

Most fishing tournaments involve competitions in which anglers compete to catch the largest fish or to have the highest total weight for a legal creel of fish. Such tournaments are not lotteries as are the tagged fish contests, but they do present some regulatory questions. What impacts do these tournaments, which are quite frequent, have on our fishery resources? How do tournament practices affect the targeted species and nontarget species? Should we have a permit and report system to get more information about the impacts of fishing tournaments? Should we limit the tournaments to particular seasons, or should we limit the number of tournaments? These are some of the questions that we are reviewing.

Another area of concern is the crowding of Fish Commission access areas that sometimes results from such tournaments. Such crowding by spectators and officials may discourage other anglers who are not contestants from using the facilities for fishing and boating. Fish tournaments are held on some waters just about every weekend during the nice weather months. Is it fair to permit the competitive events to crowd out noncompetitive anglers and boaters?

Right now, Fish Commission staff is exploring these and other issues. If you have ideas or comments about the possible regulation of fishing contests and tournaments, you are invited to share them with the Fish Commission. Just write: Regulations, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. The Fish Commission welcomes your input in the regulatory process.

Dennis T. Guise is the Fish Commission chief counsel.

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"Notes from the Streams"

Hot Pursuit

Last October I assisted West Hempfield Township Police in apprehending four escapees from a juvenile detention center in Huntingdon. They had stolen a car and made their way to Lancaster County where they were pursued by police, wrecked the car, and then scampered into the forest to hide. Several police officers, the State Police helicopter, and I arrived on the scene to join in the search. After receiving instructions from the officer in charge, I made my way to my appointed spot.

Two suspects were captured in short order, but the others were not so easy. I followed the foot pursuit via my car radio. Occasionally, the tracker said that they were going in the right direction due to the sighting of bent twigs, broken grass, etc. Suddenly, one of the suspects was spooked by the helicopter and someone got a glimpse of him. The helicopter called for the nearest unit to go down to the treeline where the suspect was last seen. I looked up and discovered that the helicopter was right overhead. I walked down to the treeline that bordered a creek and teamed up with another officer. We flushed the subject out of the area and captured him.

The suspect had just crossed the creek when we apprehended him. Someone made a comment about his obvious error—he had eluded escape while on land, but he no sooner hit the water than the Fish Commission had him. The fourth suspect is still at large.— WCO Kim D. Pritts, northern Lancaster County

Favorite questions

After about two years as a member of the Volunteer I & E Corps, I've been asked hundreds of questions. Of all these, the two I most prefer are, "Will you show me how to do it again!" from a youngster at a PLAY Derby at Little Buffalo State Park, Perry County, and, "What can we do to help?" from a senior citizen garden club member in Franklin County after an acid rain seminar.

Both groups are resources to tap—the youngsters to perpetuate angling, and the mature citizens, whether anglers or not, who are willing to help preserve the environment for the young anglers coming on—and both appear willing to be "tapped."—Bill Porter, Volunteer I & E Corps representative

Rescue effort

The Election Day flood along the Monongahela River last November put the river over 12 feet above flood stage in places and cost millions of dollars in property damage all through the valley. But thanks to three Fayette County residents, some of the river's gamefish got a second chance.

John Jenkins, a gas company employee, called me several days after the flood and told me of three young men involved in a rescue effort on the Fayette County side of the river near Naomi. They were taking fish from the pools left by the receding flood waters and returning them to the river via buckets and a very muddy pickup truck. Frank Prokopovitch, Ron Chiplasky, and Chuck Lloyd, sportsmen of the Monongahela Valley, I salute you and thank you.— WCO L. J. Haas, Greene County

Jaws

While investigating a report of a fish kill, I discovered that someone had dumped the remains of several saltwater fish into a stream after filleting them. It reminded me of a similar situation encountered by one of my deputies. He was a little nervous for his first pollution investigation, but as he approached the stream, he became even more disturbed—The first fish he found was a 4-foot shark!—Kim D. Pritts, WCO, northern Lancaster County

"Creasy—Wayne Creasy"

DWCO Wayne Creasy and I were manning the Fish Commission exhibit one afternoon at the Bloomsburg Fair last September. A boy of about 8 years old stepped up to Deputy Creasy and asked about PLAY. Creasy explained the program to him as they filled out the PLAY membership application. The boy offered his name and address with ZIP code help from his parents.

"... and you also get a packet of materials, like this patch."

"What's your name," the boy inter-

rupted, smiling devilishly.

"Creasy. Wayne Creasy."

They completed the application, and the boy's smiling parents began to lead him away from the exhibit.

"Bye," said Deputy Creasy.

"Bye, Mr. Crazy!"

"Creasy. Wayne Creasy "—

Art Michaels, editor, Pennsylvania Angler and Boat Pennsylvania

At the movies

Soon after assignment to my new district, we apprehended a person for fishing without a license. He never sent in money for the field acknowledgement, so a citation was sent. He never answered the citation, so a warrant for his arrest was issued. We tried for months to locate him, but couldn't find him. One of the officers went to see the movie, "Witness," when it came to Lancaster. The film "Witness" was made in Lancaster County, and you'll never guess who he saw in a lineup in the movie. It was the person we sought for fishing without a license. Needless to say, that person was located and the warrant was served. Being a movie star doesn't always pay off.-WCO James W. Wagner, southern Lancaster County.

School daze

Life as a member of the Volunteer I & E Corps is not without its dangerous moments. For example, a youngster once spilled my tackle box at a program in a Cumberland County elementary school. Lures flew everywhere, including one in my backside through my uniform pants. The teacher was in the process of removing the offending barb when the principal walked by the open classroom door. He turned, walked by again, popped his head in the door, smiled as only principals can smile, and continued his rounds.—Bill Porter, Volunteer I & E Corps representative

Cats

Ken Bolich, of Orwigsburg, was fishing in Maiden Creek near a farmer's backyard when he was greeted by the farmer's cat, which sat a few feet away and watched him fish. It wasn't long before Ken hooked a trout of about 12 inches long and pulled in onto the bank. The cat, which probably had some experience in this area, immediately pounced on the fish, and headed for the

barn, tearing off Ken's line in the process. By the time he put on another hook and started to fish, a different cat was sitting at the same spot and watched as the first did. After a time, Ken hooked another fish, this time a 10-inch sucker. A repeat performance ensued when this fish was flipped onto the bank, and the new cat scampered off to the barn with his booty. Ken didn't mind sharing his catch, but was grateful that the farmer only had two cats.—WCO Fred Mussel, Lehigh County

Scenes from a marriage

Last year, while patrolling Opossum Lake before the opening of trout season, I saw a man fishing near the dam. I approached this fisherman and he stated something to the effect that, "I think I may have a problem," to which I replied, "that's correct."

"This is probably going to cost me some money, right?" he said, and again 1 replied, "affirmative."

"I should have known there was some reason why no one else was fishing on a day like this," he commented.

After taking care of the necessary paperwork, I explained that he could still go fishing, but not in approved trout waters. About a week later I received a check to cover the fine and this note from the man's wife: "Just a note to thank you for giving my husband a citation on Sunday. The only reason he went fishing was because he was mad at me! Ha! You made my day!"—WCO Larry Boor, Cumberland County

Double your pleasure

On October 6, 1985, Chris Wildt of Bethlehem and Jack Harrington of Freemansburg were fishing at Beltzville Lake in Carbon County. Both were using nightcrawlers while drift fishing from the same boat. Getting hits simultaneously, both anglers landed their catches, or in this case, catch. Both had caught the same fish, a 10-pound, 27½inch walleye! The fish was officially weighed and measured, and the information was submitted for a joint Angler Award by Outdoor Life Sport Shop in Bethlehem. Included now in the history of the Commission Angler Award program is a "shared" Angler Award-Steve Ulsh, information specialist, Harrisburg headquarters





Mettle for metal

The discarded lawnmower pictured above was found by Ohioan Harold Walker with friends while fishing the "Hodge" area of the Allegheny Reservoir, Warren County. While fishing, they discovered a feeding porcupine, and soon after observing the animal, they realized that it was eating the aluminum engine block of the mower. Further investigation by the U.S. Forest Service and the Pinegrove Sportsmen's Club revealed that this same animal has eaten some aluminum signs. District Game Protector Dave Snyder has also observed this same porcupine chomping on the lawnmower.—DWCO Spear X. Proukou, Warren County (and president, Pinegrove Sportsmen's Club, Russell, PA)



You have a fishing friend in Pennsylvania



Straight Talk

ENVIRONMENTAL QUALITY INDEX

All the hype for the Superbowl, when we were told, "It is un-American not to bet on the Superbowl," can make one pessimistic about the true interests of the American public.

For the 17th year, the National Wildlife Federation's (NWF) Environmental Quality Index showed consistent headway in energy conservation and in reducing the level of many conventional air and water pollutants, but limited progress in controlling soil erosion and nonpoint pollution, and in protecting wildlife habitat.

Under the status of Wildlife, the NWF survey indicates some progress, such as an additional 8.5 million acres of prime areas for wildlife being fully protected from development, and new legislation to protect the nation's wetlands. On the other hand, the number of ducks migrating south to the continental United States fell



Ralph W. Abele Executive Director Pennsylvania Fish Commission

from 76 million in 1984 to 54 million in 1985. Perhaps the "swamp-buster" legislation will reverse the trend of losing four-fifths of the 550,000 acres of wetlands lost each year when converted to cropland. Likewise, federal projects to dam, drain, and divert waterways will be diminished.

Air quality remained about the same, in spite of a national commitment to reduce air pollution over the last decade. The Environmental Protection Agency (EPA) indicates that carbon monoxide emissions have been cut by two-thirds since 1975, levels of particulate matter are down by one-fifth, and the amount of lead in the air has been reduced by two-thirds. On the other hand, domestic coal use increased 7 percent between 1983 and 1984, and projections indicate it increased under 5 percent in 1985. We fear that this will almost certainly lead to an increase in sulfur dioxide and nitrogen dioxide emissions, which are key factors in the formation of acid rain.

Certainly water quality has improved in recent years through the construction of treatment plants. Some 296,000 miles of the country's streams have maintained their water quality since 1972, and 47,000 miles have improved. On the other hand, about 200 contaminants have been found in the nation's groundwater supplies, and thus far the EPA has set safety standards on only 22 of them. EPA researchers indicate that 63 percent of rural Americans may be drinking water tainted by pesticides or other contaminants.

Americans are continuing to use energy more efficiently. Despite a recent increase, the total U.S. energy consumption is still lower today than in 1973. But in getting the fuel, such as coal, the enforcement of the Surface Mining Act of 1977 is appallingly ineffective. In Kentucky, for example, miners were penalized in only one of 14 instances in which the law was broken. Pennsylvania only inspects 54 percent of the mines that they are required by law to inspect.

As for national forests, which make up about 39 percent of the nation's woodlands, conservationists are concerned about how these forests are managed. In response to appeals by the National Wildlife Federation, the U.S. Forest Service has begun a comprehensive analysis to determine the environmental effects of its management of old growth, especially in the Northwest. Road building probably contributes to most of the damage, and in fact, the government loses money on about 40 percent of all timber

sales because the logging roads and other expenses exceed the sale prices. The Forest Service exceeded its target for road building by 2,100 miles in the last five years, and the chief of the U.S. Forest Service acknowledges that a "high percentage" of the government's remaining 30 million acres of virgin forest will be laced with roads by the year 2000.

Conservation of soil must be considered one of the most important contributions to our national security --- yet the administration proposes slashing the budget of the Soil Conservation Service by at least two-thirds in fiscal year 1986. Encouraging signs are in the farm bill, especially the "sodbuster provision," which would take federal farm benefits away from farmers who plow fragile prairies and steep hillsides that are not included in the reserve. The similar "swampbuster provision" would protect crucial wetlands from agricultural development. Some farmers are using more herbicides than they once did to fight weeds formerly controlled by plowing. There are representatives of chemical companies who advocate even more use of chemicals for herbicides and fertilizers, indicating that all that the soil is needed for is to keep the plants from falling over.

Conservationists polled by the National Wildlife Federation answered the questions, "Is the quality of the environment you live in better, worse, or about the same as it was five years ago?" The answers were: 16 percent better, 43 percent the same, and 41 percent worse. For the similar question, "Do you think your environment will be more livable five years from now for you and your family?," the answers were: 17 percent better, 30 percent the same, and 53 percent worse.

When asked, "What do you see as the greatest threat to your environment?," readers ranked eight national concerns:

- 1. water pollution
- 2. air pollution
- 3. hazardous wastes
- 4. overpopulation in the world
- 5. acid rain
- 6. soil erosion
- 7. nuclear power plants
- 8. pollutants in the home

There is that ray of hope that Americans have learned about their problems and will profit from what they have discovered and will be relentless in insisting that the nation's environmental decline be brought to a screeching halt an that trend reversed.

Talph W. Phele

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The Cover

Staff photographer Russ Gettig snapped this month's front cover picture. The lone angler is curing his cabin fever along the no-kill zone of Spring Creek in Centre County. If your cabin fever needs an Rx, we recommend reading the articles that begin on pages 10 and 20. In addition, boating anglers won't want to miss the information beginning on pages 12 and 19, and all anglers ought to check out the ideas in the article on page 7.

Getting Into Fly Rodding



Starting off right can lead to fly rodding success on any waterway.

by Sam Slaymaker

t's always been fashionable to equate fly fishing with trout. Many are the enthusiasts, then, who begin on trout streams but soon become discouraged. What with tree cover and foliage, they have trouble casting effectively. Flies are difficult to present in riffles, currents, and eddies to spooky trout, not to mention that most beginners hate to appear as stumbling lummoxes before more experienced practitioners of the long rod. Small wonder that all too many would-be fly rod anglers succumb to the common belief that the sport is only for experts—that it's too tough to take trouble to master.

What a pity! Had they gotten priorities right, they would not have passed up this most exciting kind of fishing, and they would have found it very easy to learn.

The first aspect for those who would embrace fly fishing is to stay away from trout and trout streams—they can come later. The second is to go to a farm pond or small lake. Here, in the space of one evening, you can become a fly fisherman. This might sound preposterous, but I've been preaching this gospel for 16 years, in one form or another, with highly gratifying results.

Farm ponds or small lakes are ideally suited for beginning fly anglers. The vast majority are free of tree cover. Smooth—devoid of riffles, currents, and eddies—they are chock full of easy-to-catch bluegills and bass. And because they're generally deserted, there's no one to make fun of your errors!

Unless you live in a large metropolitan area, you are probably only an hour or less from a suitable waterway. They're easy to find and readily accessible; rural communities are girded by them. The urban sprawl has even placed many in big city suburbs. Most are stocked with bluegills and largemouth bass, and are very lightly fished. Pond owners usually welcome fishermen, but be sure to ask for permission.

Equipment

Basic, inexpensive equipment is as follows: a $7\frac{1}{2}$ -foot or 8-foot glass fly rod and a single-action reel of $3\frac{1}{4}$ inches in diameter.

It is very important that your line match the rod. A double taper 5weight floating line will do (DT5F). Note that fly line is much thicker and heavier than ordinary monofilament. This precludes attaching flies directly to the line; a nylon leader tied to the line makes it possible to affix the fly. Also, the thin, delicate leader is harder for fish to detect than much heavier line. The leader, then, keeps the line out of the fish's view. You should ask for several 4-foot bugging leaders with no taper, 3.5-pound test. Extras are handy in the event of breaking or knotting.

For your immediate purpose, a half-dozen of any kind of artifical flies will do. Whether they are trout flies or bass bugs or wet flies, dries, or nymphs, or even plastic creations, makes little difference. They should, however, be tied on small hooks, preferably nothing larger than a size 10. Buy fingernail clippers and you're ready to go.

With a very modest outlay you are ready to begin your sport as a fly fisherman.

Pond bluegills and bass feed most actively during long windless summer evenings. They rise from cool depths, where the sun's blaze had driven them earlier, and now hover near a glassy surface awaiting hatching flies, or falling flies and insects whose undulating descent through the soft afterglow is described by the crazy wheeling of hungry swallows. The stage is set for action.

Your first pond-prospecting trip should be timed for arrival in a rural or semi-rural area by late afternoon. Thus, there's sufficient opportunity to scout for farms with ponds containing bluegills and bass. Most pond owners will ask you in and tell you to keep what you catch. If your luck is good, however, a few fish for his pan are often appreciated. Above all, assure him that you will respect his premises.

The only pond I had trouble getting on was one on which a fisherman had worn out his welcome by constant littering.

Now assemble your gear and familiarize yourself with its potential. Tie the end of your line to the spool in the center of your reel. With the clippers, trim the ends protuding from the knot. So as not to kink or tangle line, crank the reel handle slowly until all line is transferred to the reel as the coil is rotated.

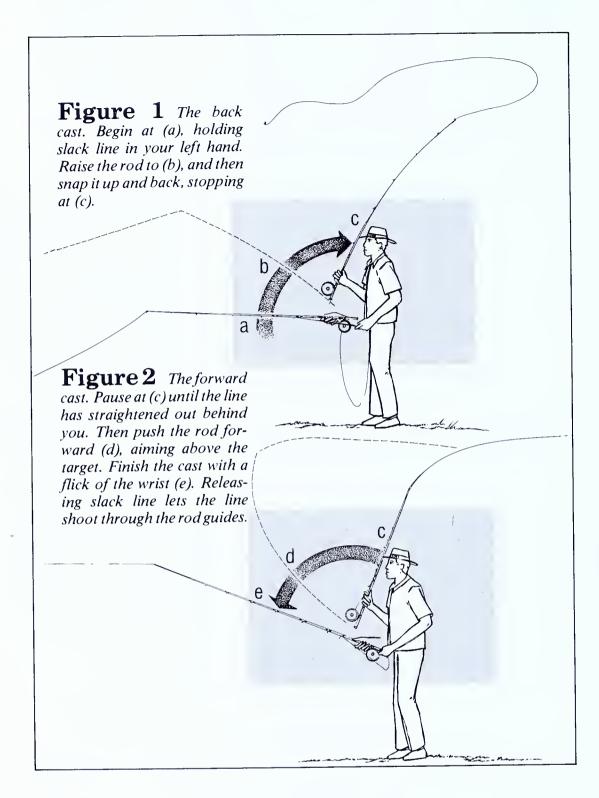
String the line through the rod guides. After it has passed through the end guide, knot it to the leader's looped end. For the time being, use whatever knot you find easiest to tie.

If you have fished with baitcasting or spinning tackle, it is immediately obvious that line is pulled from the reel by the heavier bait when it is thrown or cast. Featherweight flies cannot propel the heavier line, so fly casting is different. It is really line casting. Your line has the necessary weight to be carried through the air like a spinning or baitcasting lure. The whipping action of your rod powers the line, which in turn carries the lure.

Your reel, then, cannot be used like a baitcasting or spinning reel. Fly rod reels are simply storehouses for line. Line to be cast is stripped from the reel with one hand while you hold the rod in the other. Slide line ahead of you from the water into the air behind. Pause, then bring the rod forward. Near the end of the forward whip of the rod, release line in your hand. Retrieve line simply by pulling it in with your line hand. Slack line is held in coils or dropped at your feet until it is cast again.

Casting

Now grip the cork handle of the rod in your right hand (if you're right-handed; reverse if you're a lefty) and try some practice casts—on the grass beside the pond, without a fly. Make sure that the end of the leader is free of all the rod guides and that about 20 feet of line is stretched out ahead of you on the grass (Figure 2). Strip about 5 feet of line from the reel and



let it drop at your feet. Holding the uppermost portion of the slack line tightly, raise the rod tip, lifting line from the ground (Figure 3). With a gradually accelerated motion, swift enough to throw the line into the air behind you, whip your rod back. Pause long enough to permit the line, now to your rear, to straighten out. Before it touches the ground, flick the rod forward again with gradually accelerated motion and simultaneously release the slack line in your left hand. The 20 feet of line in the air will sail forward, carrying the extra 5 feet of slack along. You will have made a cast, then, of about 25 feet. Casts of 20 to 35 feet are standard under most fly fishing conditions.

That is the basic procedure in fly casting. You need only the rig you have and two hands. Try more practice casts on the grass. Your first few tries were probably too jerky. Remember to keep the line in the air from the time you lift it from the ground until your cast is completed. This task is much easier to accomplish when you handle a minimum amount of line, so don't practice with any more than 14 to 20 feet, laid out, and that extra 5 feet of slack in hand. Just remember, pick up, whip back (but not long enough to let the line touch down behind you), whip forward, and release your slack, all in a gradually accelerated motion. Remember, too, that the backward and forward movements of your rod must be

smooth, not jerky. Practice on the grass until you can shoot your line, but don't expect to make accurate casts right away. So long as your line feeds out anywhere in the area ahead, you will be able to catch a bluegill.

Fishing

Knot a fly to the end of the leader, and trim away excess leader with your nail clippers. After checking the rear for possible obstructions, face the pond, and toss the 20 feet of line on the water in front of you. Strip off the 5 feet of slack; hold it in your hand; cast as before. On completing the cast, don't budge the fly for 15 or 20 seconds. Then draw it in slowly with a hand-twist retrieve, and with short, rod tip jerks, coiling line in or around your line hand. Your fly should be on or just under the surface. You are simulating a fallen insect and its subsequent struggle in or on the water. No matter how realistic your fly looks to fish, it is the action that will attract them. When the leader approaches the tip guide, prepare to cast again. Now it's time to skid the fly from the water and throw it into a high back cast, preparatory to the next delivery.

Sooner or later you will be rewarded. A flash of lavender-flecked red-orange, coupled with a gurgling splash, signals the strike of a bluegill. A quick upward flick of your rod should set the hook, but you will probably be too stunned to strike back. Chances are it won't matter; hard-hitting bluegills and bass will usually hook themselves. The bare 2 ounces of the rod's weight will magnify the fish's weight, especially when it turns broadside and sets off on a long curving run.

Resist the urge to give with a mighty haul and lift the fish clear. Jus keep the line taut and your rod tip high, and steadily retrieve line in your hand until the fish nears the bank.

Keep practicing on ponds until you feel comfortable with your rod and have confidence in your ability to catch bluegills and bass. Believe me, this won't take long. I've seen many who have been very successful in one evening. For them, trout streams then presented a minimum of frustration and a lot of fun.

Building Strong Angler/Landowner Relations

by David P. Krupa

photos by the author



posted, anglers lose more than available fishing space. They lose the respect of the landowner.

Throughout the Commonwealth flow hundreds of miles of private trout streams. Together with dozens of ponds, they provide anglers with thousands of hours of recreational time that would not be available if it weren't for the cooperation of private property owners. Every angler agrees that strong angler-landowner relations are important, but maintaining good relations or developing new ones require skill.

Attitude

We must accept the idea that we are responsible for a large part of the way in which property owners view the entire angling fraternity. It could take only one bad apple to destroy what hundreds of other anglers have accomplished. Yet, it could take only one concerned angler to improve the way a local landowner views us all.

Taking a "someone else will do it" attitude has led to the destruction of many fine waterways and their closure to public access. Become that "someone else" and ask yourself a simple question: "How would I behave here if it were my property?" If it were, would that beer can laying at the bottom of your favorite pool be so far out of reach? Would the extra 100 yards be that far to walk if it meant preventing damage to a fence row?

I stood atop a bridge one hot July afternoon watching a small brown

trout sipping insects in the coolness of the shadows below. I was there only a short while when a car pulled up and parked near the edge of the stream. Two fellows quickly got their things together and headed downstream. They appeared to be well-furnished for an evening of fishing: rods, vests, boots, and a case of beer were among their supplies.

The next evening I returned to the stream for what I'd hoped would be a few hours of relaxation. Fishing downstream it soon became apparent where the two had spent the last evening. The entire case of empty beer cans lay scattered along the stream bank. I stood there a moment before beginning the task of policing the area. I found it hard to accept the idea



A landowner discusses with an angler where the best spots are along the stream that traverses his land. Landowners appreciate and respect conscientious anglers.

that the empty cans were simply too heavy to be carried by those fellows back to their car to be disposed of properly. The land they had selected to litter was private property open for the use of anglers; what if the owner had found the cans?

Having the right attitude means in part that your day astream is for enjoyment, that the number of fish caught drops down the list of priorities. It means that you accept the responsibility to ensure that private property will remain open. Once you've accomplished this, you're on your way to improving anglerlandowner relations for everyone.

The next trip

There are those of us who are blessed with prime fishing only minutes from home. Nevertheless, each fishing trip takes a certain amount of preparation, during which time a number of things can be done that can be used later to improve the way a property owner looks at anglers—remember, you represent well over a million anglers statewide!

First, I don't believe that there's ever been a fishing trip that I've made where I haven't found litter along the stream or lake, or in a parking area near where I'm fishing. A plastic garbage bag is one of my regular pieces of equipment. In fact, it won't hurt to take along two-one for a fishing buddy. These bags, which are often filled with litter at the end of the trip, are returned home to be put out with the next trash pick-up. If you someday forget to take along a plastic bag, stuff your vest or creel with litter found along your way—it has a way of making a not-so-successful day a lot more meaningful.

Acquiring permission to fish on private property is something that is seldom practiced. Many streams are stocked by the Commission, and anglers take for granted that landowners permit access. However, we are looking to improve our relations with property owners. It takes only a few minutes to stop at the farmhouse down the road and ask if it would be all right if you fish the stream that flows through the owner's pastureland. You'll often find a landowner who is receptive and thankful that you took the time to stop. Many times these landowners

may want you to park your vehicle in certain areas so that you don't damage or interfere with farm equipment. Your stopping will give them the opportunity to tell you this.

Having a piece of paper with your name, address, and telephone number on it is a good idea. Leave this with the property owner if he should need to get in touch with you in the future. A \$200 box of flies was once returned to me simply because I left this information with a landowner.

Get the names, addresses, and telephone numbers of property owners on whose land you are fishing. This list can come in especially handy if the stream or lake you fish is any great distance from home. A quick phone call lets landowners know of your intended trip and to be expecting you. Information on water conditions can also be passed along to you, as can any other problems that may affect your fishing.

While fishing on private property, avoid picking fruits or digging up plants. In some cases, the property owners will be happy to let you pick a handful of pears or apples. All they want is to be asked first. Park your vehicle in areas designated by the landowner or by signs. Never park in areas that may be needed by farmers as access points to fields or timberlands, and never park in or walk through cultivated fields. Damage to fence rows, farming equipment, or structures can quickly lead to the posting of land. Any damage that may have occurred accidentally should be reported to the owner, and if you see any damage done by other individuals, report it to the nearest Fish Commission law enforcement regional office, listed on page 51 of the 1986 Summary of Fishing Regulations and Laws.

At the end of your fishing trip, stop back at the property owner's residence. If your day was successful, offer to share your catch. Many landowners do not fish, but they will jump at the chance to have fresh fish for supper. Many landowners that I've had the opportunity to meet over the years are now good friends. I've ended many fishing trips with hot coffee and fresh home-baked bread because of the respect given a deserving property owner—not to mention an open invitation to come again.

Adopt-a-Stream

When a few concerned anglers get together, things get accomplished. Having been involved with the Pennsylvania Fish Commission's Adopt-a-Stream program, I firmly believe that it is the finest group effort available for involving anglers and property owners in attaining a common goal: improving and maintaining our waterways and building strong, lasting relationships among all involved.

You work directly with people whose properties border your favorite fishing spots. You build lasting friendships that improve how landowners view all who pick up a fishing rod.

During the early phases of the Adopt-a-Stream project that I was fortunate enough to be involved with, we agreed to repair a broken fence line along a field that bordered a section of stream we were improving. This had little to do with the project itself, but it left a lasting impression on a landowner who in his words was "Glad he met us."

The efforts you make to improve angler-landowner relations seldom go unnoticed. During the beginning stages of our Adopt-a-Stream project, we met some good people. These people told other property owners of the work we were doing and of the attitudes we had toward improving the relations between anglers and landowners, and without realizing it, we had won the respect of five times the number of landowners whom we'd initially contacted. When the time comes to move on to other streams, we as a group of concerned anglers will have an impressive portfolio to present to other landowners, and we'll have even greater opportunities to strengthen relationships.

When you think about how we can improve our standing with property owners, it's really not that difficult to come up with answers. An angler wants only to get out and enjoy some peace and quiet and hopefully to take a fish or two; a property owner only wants a little consideration from the angler.

If you put to use a few skills and respect the property of others, as you would want them to respect your property, we could perform conservation miracles.



Here's a good way to cast off a case of cabin fever.

by Derek Roth

o me, farm ponds mean bass and bluegills. As a kid, I spent countless summer afternoons fishing farm ponds. In those days, a nightcrawler and bobber handled the business end of the outing. That type of rig could let a kid enjoy the pond without actually spending too much time tending the rod. Chasing crayfish and frogs, while at the same time having a chance to catch a lunker, was darn near heaven.

I managed to catch a lot of bluegills in those days, but bass were the ultimate trophy. I can still recall the rare occasions when I managed to tie into a monster of 12 inches or so. 1 guess those early boyhood days trapped me in the summer farm pond routine. Looking back over the years, I can see that I rarely fished farm ponds any time but during the warm summer months.

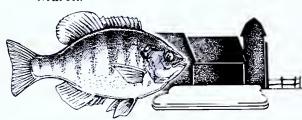
Several years ago, I decided to remedy that situation. Right after the ice retreated off the local ponds, 1 started making plans to go after bass and bluegills, although I must admit I was reluctant to venture out to a farm pond when the air and water temperature both hovered near 45 degrees. What really made up my mind was a call from one of my fishing buddies.

"I got about 25 bass today and my wife got at least that many more," he chuckled over the phone. When he added that they took home six bass in the 3-pound range from two ponds, 1 was hooked. The next day I was on one of the ponds with him.

The weather was typical of March, a lot of sunshine and a lot of cold wind. It wasn't what I considered good warmwater weather, but I was determined to give it a try. After an hour of catching bluegills on the larger pond, I decided to try the smaller, more sheltered pond.

I started off with the old reliable nightcrawler suspended from a bobber and immediately hit paydirt. I picked up a few small bass in short order, and typically, decided to try something else, even though I was catching bass on the crawler. I put on

a yellow crappie jig. On the next eight casts, I landed six bass and a huge mass of pond weed that gave me a fair struggle in its own right. Before the day was out, I caught and released a few dozen bass, and took home two over 3 pounds. My partner caught two nice bass and a stringerful of bluegills on the larger pond—a respectable catch from a farm pond in March.



Two things happen to lakes and ponds in March that make it a "hot" month for bass and bluegills. A thermal turnover occurs shortly after ice-out, causing the pond water to mix from top to bottom and reach the same temperature throughout. This mixing stains the water, which in turn allows it to absorb more heat from the early spring sun. The result is a relatively rapid rise in water temperature that stimulates the fish to feed after a long, cold winter. The fish are also anticipating the upcoming spawning season and are eager to put on weight before the stressful spawning period.

If you want to try your hand at catching warmwater fish in the cool waters of March, here are a few tips.

Sunny days, even if they are cool, are usually best. Ponds can warm or cool several degrees over the course of a day, depending on whether it is sunny or cloudy. A few degrees fluctuation in water temperature can make a big difference in feeding habits. Not surprisingly, late afternoon on a sunny day is often the best time to fish.

Fish slowly. Bass and bluegills don't attach ferociously in cold water; they simply follow the offering and inhale. A worm dangling from a bobber may seem rather spartan, but it is quite effective on both species.

Another trick that is effective on bass is to use a bobber several feet above a twister tail lure. A stop-andgo retrieve will cause the twister tail to rise and follow during the retrieve, and then flutter down during the stop.

On a windy day, just let the lure hang from the bobber. The wave action will cause the twister tail to wiggle slowly and enticingly.

Try different depths. The water temperature in most ponds will be relatively constant throughout. Bass and bluegills are not affected by thermal stratification and may be found anywhere in the pond. In muddy water, the shallow areas are usually the warmest because of the absorption of heat from the sun, and fish often congregate there.

Watch the wind and water movement, particularly on small ponds. Wind action pushes surface debris to one spot on ponds. That also indicates that food is being pushed in that direction. Fish that end of the pond first.

Topwater lures are rarely effective. Put your lure or bait down in front of the fish. Wet flies and garden worms are top producers for bluegills; diving plugs, soft plastic lures, minnows, and nightcrawlers are excellent for bass.

Now that old man winter is giving way to the warming trend of spring, the denizens of local farm ponds are beginning to stir. Instead of suffering through another month of cabin fever while waiting for the season opener on trout, why not get an early start on farm pond fishing?

Pond Publication

If you plan to build a farm pond, or if you own a pond and need guidance and information concerning its management, the Fish Commission has available a 4-page publication called, Planning and Management of Small Ponds for Fishing. This information, which first appeared in Pennsylvania Angler, contains specifics on stocking, diagnosing problems, water supplies, and how to get technical assistance. For a free copy, contact: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. Please include a business-sized selfaddressed, stamped envelope with requests.

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APSIZING

by Barry A. Mechling and Janet R. Mayer

magine that you and a buddy are finally getting that well-earned extended weekend away from it all. No work, no family, no telephone, no hassles. You're loading your 17-foot canoe with the bare essentials for a three-day trip into the "wilderness" to do nothing but fish and relax.

Bare essentials—food, clothing, shelter, fishing gear, cooking supplies, anchors, and of course, the personal flotation devices! One good push and off you go. One major concern: There is only an inch-and-a-half of boat sticking out of the water because it is so overloaded. You both recognize the problem, but are more concerned about the extra drag on the boat and how difficult it is to cut through the water let alone steer efficiently, rather than the obvious. What is the obvious? Accidental

Accidents can happen whenever you're afloat and usually occur without warning. They often occur because a basic safety rule is ignored or broken. Common accident causes are:

- overloading
- damage from wakes
- gasoline leaks or spills
- engine too big or too heavy
- riding on decks or gunwales
- operating in a reckless manner
- explosion and fire during fueling
- operating under the influence of drugs or alcohol

Small open boats are involved in more accidents that result in fatalities than any other type of watercraft. The usual causes of these accidents are:

- Passengers standing up and falling
- Inexperienced boaters operating in unsafe waters.
- Overloading the boat with passengers and equipment.
- Taking the boat into waters that are beyond its capacity.

According to the Commission's boating accident analysis for the past eight years, capsizing and falls overboard are without doubt the leading cause of accidental death while boating in Penn-

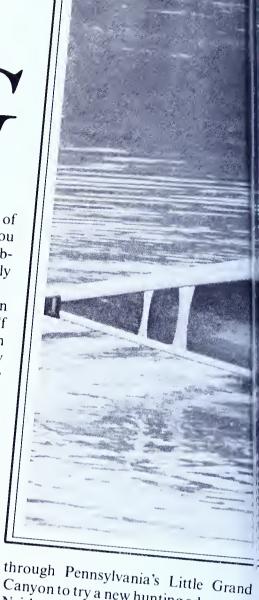
sylvania. If you review the causes of boating accidents and fatalities, you can see clearly that many of the problems and potential hazards relate directly to angling and hunting from a boat.

There are so many reasons for an unsuspecting sportsman to find himself suddenly thrown into the water, which until a moment ago, was comfortably supporting the boat he was using. How many times have you seen boaters anchor off the stern in moving water? Sometimes, a capsized boat begins its fatal moves by swamping and then rolling over. Often, stern anchoring in moving water pulls the back of the boat to and below the waterline, causing it to flood. The scrambling that goes on to try to stay high and dry is often a portrayal of comic tragedy. A person's sudden movements, combined with the lack of knowledge of stability, are often the final step in the boat's rolling completely into the water. All is such needless trauma, if the boaters had anchored properly initially.

Probably every duck hunter has had a battle with his hunting partner while in a boat. You know the reason . . . A sudden jump from the sitting position to follow, aim, and shoot at ducks or geese flying or passing directly overhead. There you sit, concentrating intensely on your target, and all of a sudden, you find that you're not only losing your target, you're now fighting to keep your life! Sudden movements change the stability of the craft immediately and often too quickly to allow you to react accordingly.

The same thing frequently afflicts fishermen. When hunting or angling with a partner, you not only need to concentrate on your own body movements, but those of another person. Perhaps a discussion reviewing some general do's and don'ts before launching would eliminate many of these unnecessary accidents.

All fall, two friends have been awaiting the start of deer season to take their jointly purchased raft on a float trip



Canyon to try a new hunting adventure. Neither has boated this particular waterway before, and never thought to plan ahead regarding the actual rafting. The November rains caused the creek to swell more than usual, but these two buddies had rafted recreationally many times in the past, and were determined under any circumstances to make this trip.

Their three-hour drive to this site caused them both to disregard their concerns after seeing the rushing water, and because they had no other optional site to hunt, they continued as planned. They weren't in the water more than 20 minutes when the force of the powerful moving water slammed them into a mid-stream boulder. They got out of the frigid water with their lives, but lost all gear and the raft. One of the two was

All this could have been avoided if each sportsman had used common sense. Many times hunters and anglers are the victims of Mother Nature's mood swings, and have little choice but to make the best of an otherwise miserable situation. If they maintain a level head, use the skills and knowledge they



Art Michaels

better enjoy their hunting and fishing experiences while boating. PA

Barry A. Mechling is a Fish Commission boating education specialist. Janet R. Mayer is the Bureau of Waterways special programs coordinator.

The accident descriptions in this article were derived from events that actu-

In an Emergency

hould you find yourself suddenly Immersed in water, what you do within the first 10-15 seconds may determine whether or not you survive. The most critical component of survival is to remain calm. Don't panic or fight the water. Don't worry about your gear, either. Material objects have little value in comparison to human life. Hang onto the boat because it provides more flotation and makes a bigger target for

Clothing can preserve body heat and help you float. Fasten clothing around your neck to trap air. Keep your arms underwater to keep your body movements slow and calm. If you are wearing trousers, bend your legs to hold the air in around your knees. The air trapped in your boots will help keep you afloat.

In moving water, keep your feet at the surface pointing downstream to fend off rocks and obstructions in your path as you float with the current. You have less potential to get your feet trapped under submerged rocks or logs while floating this way, and you can best see danger downstream. Steer with your arms and hands to get to shore.

The single most important safety aspect in the event of a capsizing is wearing a personal flotation device. During the first few seconds of sudden and unexpected immersion, a PFD gives you that extra assistance in gaining your bearings so that you can effect your self-rescue.—Barry A. Mechling and Janet R. Mayer

Preparing thoroughly for capsizing makes good safety sense. The capsizing pictured here shows Barry Mechling, a Commission boating education specialist who is highly trained in water rescue. Standing by just out of the picture are three other boating education specialists in two craft.

Paddlers should practice capsizing to he prepared for this occurrence, but only in the safest conditions—a shallow lake, calm conditions, and plenty of trained helpers. The water depth in this picture beneath the canoe is about 21/2 feet.

Special thanks goes to Memorial Lake State Park, Department of Environmental Resources Bureau of State Parks, for permission to photograph this picture at the lake.

County Features Cameron, Clearfield,

Cameron, Clearfield, and Elk Counties by Jeff Mulhollem

ameron, Clearfield, and Elk counties, which border each other, are located in rugged, mountainous northcentral Pennsylvania. Some of the finest trout angling opportunities in the state exist in Cameron and Elk counties.

Without exception, these are freestone streams and manmade lakes, and tactics that produce on other similar Commonwealth waters take trout here. Bait fishermen catch trout on worms, nightcrawlers, salmon eggs, cheese, and corn. Lure fishermen score with small spinners and spoons, and fly fishermen fool fish with streamers, nymphs, wet flies, and dries in standard patterns.

These three counties provide limited chances as well for warmwater fishermen to catch largemouth and smallmouth bass, tiger muskellunge, perch, crappies, bluegills, walleye, and bullheads.

Cameron County

Wildlife abounds in Cameron County, but fishermen should beware of the rattlesnakes that are frequently found along the streams. Be alert also for possible rare sightings of wildcats, which seem to be repopulating the area.

Stevenson Reservoir

Located on the First Fork of the Sinnemahoning in the eastern portion of the county, this 142-acre impoundment is heavily stocked with rainbow and brook trout. The dam, built for flood control purposes, is in the middle of a scenic state park, which offers sanitary facilities, a boat launch (electric motors only), and a campground.

The Fish Commission plans to stock a total of 21,000 trout in Stevenson Reservoir this year, including winter, preseason, and in-season plantings. Anglers use salmon eggs, miniature marshmallows, and lots of corn to catch them.

The whole lake is excellent for trout fishing, but the northern end—near the beach and boat launch—is best when the water warms up. Trolling Rooster Tail spinners takes trout.

Stevenson Dam, which is heavily fished, also holds black crappies, yellow perch, and tiger muskellunge, as well as a population of uncommonly large brown bullheads. An 18-inch bullhead was caught there last year, and 15-inchers are not unusual. Crappie fishing is good through mid-June, and small jigs and live minnows load stringers. Use big, live chubs or plugs like the Vamp Spook to fool the tiger muskies.

Driftwood Branch, Sinnemahoning Creek

This big, brawling river is stocked heavily with brook, brown, and rainbow trout over 38 miles. The Driftwood

Branch flows through Emporium, the county seat, and Driftwood Borough.

The upper end of Driftwood Branch, from Elk Creek upstream, is only stocked preseason with brook trout. Browns and rainbows are planted downstream from Elk Fork to Driftwood.

For fly fishermen on the Driftwood Branch, standard patterns produce. Baitfishermen do well early in the season using worms, salmon eggs, and nightcrawlers.

Anglers do a lot of nymph and wet fly fishing early on. It gets to be good dry fly fishing once the hatches start. There is a one-mile stretch of the Driftwood Branch just west of Emporium that is managed for delayed harvest, fly fishing only. Paralleled by Route 46, access is easy and anglers can park in the Cameron County Fairgrounds and use facilities there.

The fly fishing area is probably one of the best in the state. The fishing is just super year-round.

The lower reaches of the Driftwood Branch also have a nice smallmouth bass population. Softshell crayfish are the best bait for the bass.

First Fork, Sinnemahoning Creek

The First Fork, although not as long as the Driftwood Branch, is similar. It is paralleled by Route 872, and is stocked with rainbows and browns from Stevenson Dam to Wharton. Some fine trout fishing is available in the tailrace of the dam, and smallmouth bass, tiger muskies, and bullhead catfish are also there in good numbers.

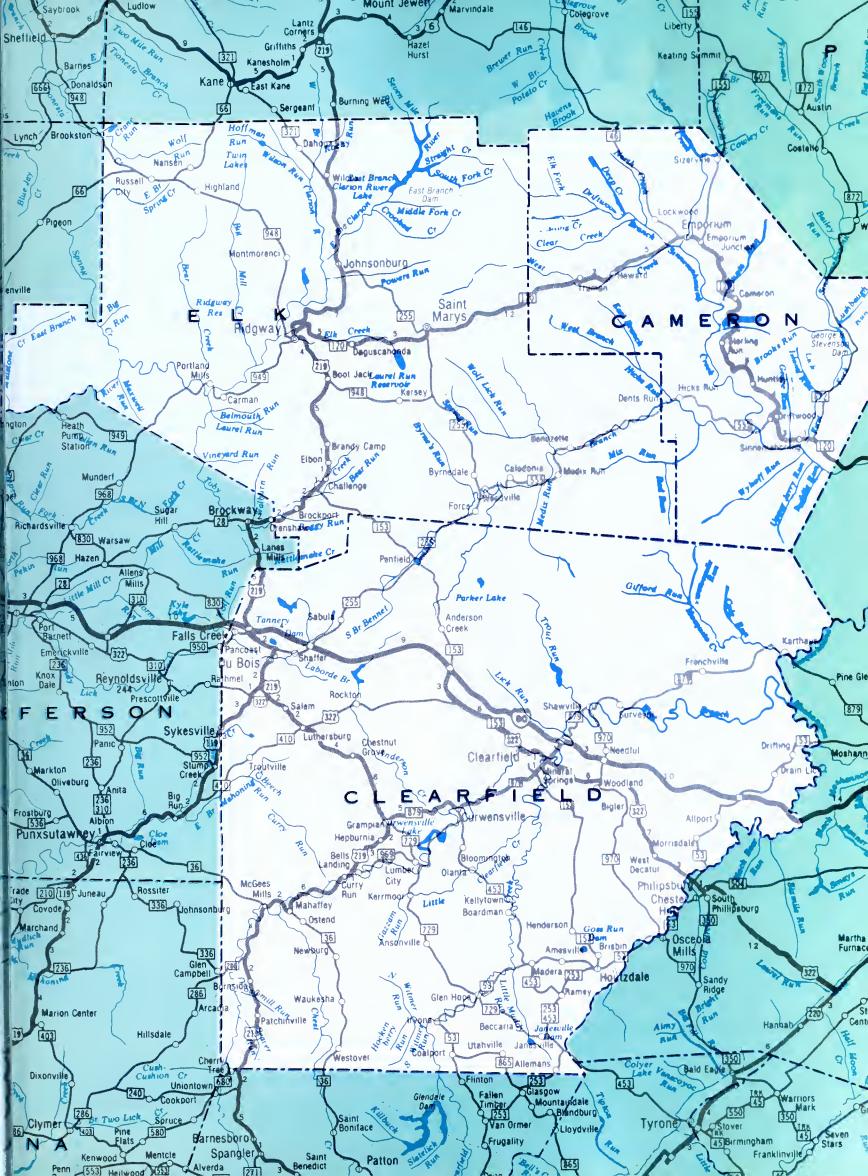
Portage Branch, Sinnemahoning Creek

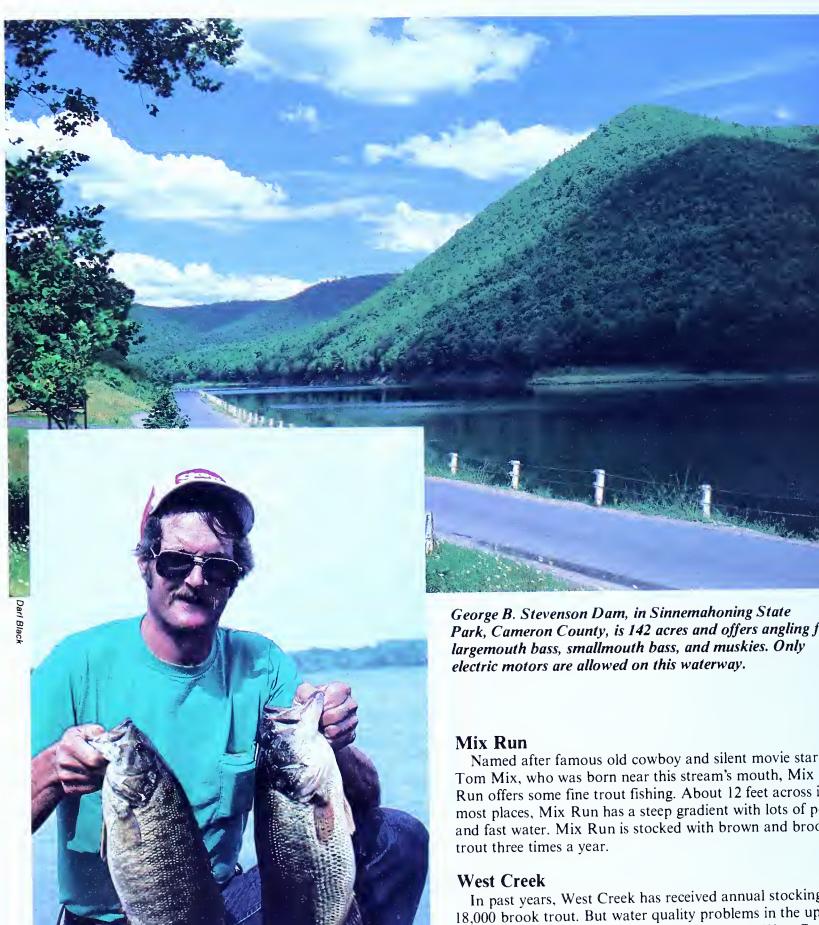
From Emporium to Sizerville State Park, about seven miles, this stream is stocked with brook trout. Easy access is available from Route 155, which parallels it. The Portage Branch has few pools and lots of flat water, but provides fair to excellent angling, especially early in the season. There are some carryover browns in the pools, migrants from the Driftwood Branch.

East and West branches, Hicks Run

The upper end of the West Branch flows through Gamelands 14. It is designated wild trout water and offers excellent fishing, if you are willing to walk three miles. From the lower end of the gamelands to the confluence with Bennetts Branch, the West Branch is stocked with brook

The East Branch of Hicks Run, which also runs through Gamelands 14, is stocked with brook trout over about seven miles.





Look for smallmouth bass and largemouth bass action in Cameron County at Stevenson Dam, and Clearfield County at Curwensville Lake and in the West Branch Susquehanna River, and in Elk County at Clarion River Reservoir and Ridgway Reservoir.

Park, Cameron County, is 142 acres and offers angling for largemouth bass, smallmouth bass, and muskies. Only

Tom Mix, who was born near this stream's mouth, Mix Run offers some fine trout fishing. About 12 feet across in most places, Mix Run has a steep gradient with lots of pools and fast water. Mix Run is stocked with brown and brook

In past years, West Creek has received annual stockings of 18,000 brook trout. But water quality problems in the upper end have jeopardized this year's stocking there. West Creek flows from Emporium to St. Marys and is paralleled by Route 120 for more than eight miles. The lower end of West Creek, below Truman, will definitely be stocked.

Wycoff Run

Flowing from Sinnemahoning to Quehanna, Wycoff Run is stocked with brook and brown trout over seven miles. The stream provides good fishing all year. Wycoff Run is paralleled by a blacktopped state road with no route number.

Upper Jerry Run

Stocked with brook trout over five or six miles, Upper Jerry is a good place to get away from the crowds after early season pressure. It is located in the southern tip of the county, off Route 120.

Brooks Run

Near Stevenson Dam, Brooks Run is easily accessible from Route 872, where a turn must be made onto a forest service road. Stocked with brook trout over three miles, Brooks Run empties into the dam near the boat launch.

Clearfield County

Despite severe damage to streams from both past and present coal mining activity, Clearfield County offers decent fishing for both coldwater and warmwater species. A lightly populated county like Elk and Cameron, Clearfield County abounds with wildlife, especially whitetail deer.

Little Clearfield Creek

A slow-moving, bottomland stream, Little Clearfield Creek is stocked with rainbow and brown trout over 12 miles. A tributary, Gazzam Run, which flows into the upper end, is also stocked with brook and brown trout.

Little Clearfield Creek is probably the heaviest-fished stream in the county. Its water quality is very good.

The entire waterway downstream to well below Oshanter provides good fishing. A good spot is the widest section, below Oshanter, where an old railroad grade parallels the stream for two miles and anglers can drive in. Route 453 crosses Little Clearfield Creek near Olanta, another easy access point.

Curry Run

This mountain stream has its origins in Gamelands 87 near the western border of the county. Curry Run is stocked over eight miles from the gamelands to where it empties into the West Branch of the Susquehanna River at the village of Curry Run on Route 219.

Medix Run

This small mountain stream begins in Clearfield County and flows north into Elk County, through Gamelands 34 into the Bennett Branch of Sinnemahoning Creek.

Brook and brown trout are stocked over an 8-mile stretch three times a year. Anglers should drive to the village of Medix Run and take a forest service road off the Quehanna Highway that runs along the stream.

Chest Creek

This waterway is the biggest trout stream in Clearfield County, and it's easy to fish because Route 36 parallels it over its entire length.

The Commission stocks brown and rainbow trout here over 13 miles. The water quality is pretty good, although strip-mining in the area does cause some occasional problems with siltation.

The trout are generally spread out in Chest Creek because the Fish Commission uses the easy access from Route 36 to distribute the fish widely.

Bennett Branch, Sinnemahoning Creek

A fairly small stream, Bennett Branch holds some big brown trout nonetheless. It is stocked with brook and brown trout from the village of Penfield in the northwestern corner of the county south to its headwaters in Gamelands 93.

Parker Dam

A state park dam on Laurel Run, a campground and other facilities are available. This small lake is stocked only with brook trout.

Located in the northwestern part of Clearfield County, Parker Dam is heavily fished, even in winter.

Ice fishing is pretty good there, and access is easy. The park is located just off Route 153.

Tannery Dam

A small impoundment within the city of DuBois, 3,000 rainbow trout are planted there annually. Tannery Dam receives heavy early-season fishing pressure.

Curwensville Lake

This warmwater fishery has a summer pool of 790 acres and provides excellent ice fishing. It holds a good population of channel catfish, as well as largemouth bass, big yellow perch, and tiger muskellunge.

November and December seem to be the best time to catch Curwensville Lake's muskies.

Susquehanna River

For more than 90 miles this big river surges through Clearfield County. But fishing opportunities only exist between the village of Mahaffey on Route 36 where Chest Creek enters, to the lower end of the city of Clearfield. But even the lower section, from Curwensville to Clearfield, is not so good after several streams polluted by mine drainage join the river.

Smallmouth bass are making a comeback in the Susquehanna in Clearfield County, however. The Commission has been putting them into the river during the past four or five years, and the smallmouths are beginning to take hold and reproduce.

Tiger muskies also patrol the river, and anglers have been catching some big channel cats. Although access to the river is rather limited, Route 219 and Route 969 run along the Susquehanna for long distances.

Elk County

More than 70 percent of Elk County is publicly owned. Much of the western portion of the county is in the Allegheny National Forest. Elk County is remote and isolated, with its population centers in the middle. The Commission stocks 41 waters with trout.

To find one's way around the forest service roads that lead to many of the fine trout streams in the Allegheny National Forest, a map should be obtained. You can get a map from the Allegheny National Forest headquarters in Warren for \$1. Write and ask for one. The address is P.O. Box 847, Warren, PA 16365.

It's almost a necessity to have a map to get to the streams

in the national forest. There are forest service roads to get to almost all of them.

Bear Creek

Bear Creek is a medium-sized stream that flows through the Allegheny National Forest in the westcentral part of the county. A forest service road provides access. Brook trout are stocked here over 12 miles. Bear Creek also holds some native brook trout.

East Branch, Clarion River

Located in the northcentral portion of the county, this always cold stream flows out the bottom of East Branch Lake (Clarion River Reservoir), and flood-control dam. Brook trout are stocked in the East Branch over 7 miles.

Anglers should try the section running through Bendigo State Park. Legislative Route 24021 parallels the stream there.

Hicks Run

This waterway is a medium-sized mountain stream that is stocked for more than 3 miles with brook trout in Elk County. It is paralleled by a forest service road, which can be reached by taking Route 555 to the village of Hicks Run.

Laurel Run Reservoir

This very deep 100-acre lake is the water supply for St. Marys in the center of the county. No boating is permitted, but the impoundment is stocked with brook and brown trout. Located off Route 120, the Fish Commission maintains an access area for parking near Laurel Run Reservoir.

Twin Lakes

This waterway is an excellent family outing area in the northwestern part of the county. A 7-acre lake, Twin Lakes is heavily stocked with brook and rainbow trout. It has a camping area and is very remote—forest service roads provide access.

Big Mill Creek

A one-mile fly-fishing-only area highlights Big Mill, located in the westcentral part of Elk County. It is stocked with brook trout over 12 miles.

The fly fishing area is just north of Ridgway Reservoir, and is paralleled by a forest service road. One good spot is downstream of the Route 948 crossing, but the entire stream is good.

Millstone Creek

A large stream in a remote area near Marienville in the extreme western end of the county, Millstone Creek is stocked over 3 miles with brook trout. A forest service road runs alongside it.

The East Branch of Millstone Creek is stocked with brook trout over 6 miles, and the West Branch of Millstone Creek is stocked in Forest County. Loleta Campground, operated by the U.S. Forest Service, is located on the East Branch and provides a nice place for anglers to stay.

Ridgway Reservoir

This 75-acre lake is the water supply for Ridgway Borough. It's stocked heavily with brook trout and provides

great ice fishing. The smallmouth bass fishing in the lake is good, too. Populations of perch and panfish are also thriving. No boating is permitted.

West Branch, Clarion River

This is the best trout stream in the county. It's a large stream stocked with brown and brook trout in the northcentral part of the county paralleled by Route 219.

The West Branch is stocked over 10 miles in Elk County, and over 4 miles in McKean County. Near the town of Wilcox, a section is managed for delayed harvest.

Spring Creek

Flowing through the national forest in the western end of Elk County is this big stream, stocked with brook trout for a total of 15 miles. Nine of those miles are in Forest County. A good spot to try is near Hallton. Use Legislative Route 24002 to get there.

Wilson Run

Little Wilson Run is paralleled by Route 32, between Kane and Wilcox. It is stocked with brook and rainbow trout over six miles. It is overlooked, but can provide good action.

East Branch Lake (Clarion River Reservoir)

A 1,240-acre flood control reservoir operated by the U.S. Army Corps of Engineers, East Branch Lake lies north of Glenhazel in the northeastern part of Elk County. It has two boat launches.

The bass fishing is spotty, but it can be excellent. Smallmouth bass are taking over, a welcome development, and they will soon be the predominant species. Musky fishing is very good here, and walleye fishing is up and down. Oddly enough, trolling doesn't produce well on East Branch Lake. Casting plugs and lures to shore is a good way to score here.

Clarion River

From Ridgway to Cooks Forest—40 miles by river—smallmouth bass fishing ranges from fair to excellent. The river is currently being managed for trout and is stocked.

The bass really perk up here about September or October, but watch out for the canoes.

During the warmer months, the Clarion River is the site of an almost unbelievable number of organized canoe trips, and anglers occasionally have to dodge a group of boats.

Owls Nest Duck Ponds

These ponds are operated by the U.S. Forest Service and the Game Commission for waterfowl management. They provide excellent bluegill fishing, and often good largemouth bass angling. The bass tend to run small, but there are a lot of them. Minnows and spinners are a good bet here.

Jeff-Mulhollem is a freelance writer. For their assistance with this manuscript, he thanks the following people: Bernie Ambrose, waterways conservation officer, Elk County; Stan Hastings, waterways conservation officer, Cameron County; and Ed Brown, waterways conservation officer, Clearfield County.

The Boating Advisory Board

by John Simmons



any times you hear about the Boating Advisory
Board and its involvement in the establishment of regulations for the operation of boats in the
Commonwealth. Here's an insider's look into the Board's activities, and who the members are.

The Board is comprised of five knowledgeable boaters who are appointed by the governor to staggered terms of five years. Individually these members represent no specific geographic area or particular boating group, and they serve without pay. The secretary of the Department of Environmental Resources (DER), the executive director of the Fish Commission, and the state boating law administrator, who is the assistant executive director for waterways and secretary to the Board, are ex officio members. The deputy director of the Bureau of State Parks is the designated alternate for the secretary of the DER.

The function of the Board is to advise the Fish Commission on all matters relating to boating on the waters of the Commonwealth and to make recommendations on proposed boating regulations.

Meetings of the Board take place twice a year on a scheduled basis to consider changes to the boating regulations. These meetings are open to the public, and the public is encouraged to participate in any discussion. Additionally, individual members of the Board may meet informally on location to see first-hand what the problems are and to develop possible solutions for consideration of the full Board at its next scheduled meeting.

After the Board agrees on a proposed regulation change, its recommendation goes to the Fish Commission for consideration. If approved by the Commission, the proposed regulation is then published in Pennsylvania Bulletin as a notice of proposed rulemaking. This notice invites public comment for a period of 30 days. If no substantive objections are received, the proposed regulations are brought before the Commission again at its next meeting for final approval. After various legal reviews, the adopted regulations are again published in Pennsylvania Bulletin.

On May 6, 1985, Governor Thornburgh named Edward Rogowski, David Coe, and Helen Lange to the Board. He also reappointed the current chairman of the Board, Clayton Buchanan. Mr Buchanan resides in Pittsburgh and has been involved in boating all his life. He is an active member of the U.S. Power Squadrons, the U.S. Coast Guard Auxiliary, and the Pennsylvania Boating Association. Licensed as a river captain by the U.S. Coast Guard, he currently plies the Three Rivers in the motor vessel Good Ship Lollipop. "Red," as he is known to his friends, has been a member of the Board since 1977.

Mr. Coe resides in State College and is employed by the State College School District. He is a member of the Bald Eagle Power Squadron, the U.S. Coast Guard Auxiliary, the Nittany Bassmasters, Centre County Federation of Sportsmens Clubs, Spring Creek Chapter of Trout Unlimited, and is past chairman of the Boating Committee of the Pennsylvania Federation of Sportsmens Clubs. He owns boats from canoes to cruisers.

Ed Rogowski is from Holland, PA. He is vice-president of the Pennsylvania Boating Association and president of the Delaware River Yachtsmcn's League. Ed has been boating for many years and is active in the development of recreational boating in the Philadelphia Delaware River area.

Helen Lange comes to the Board with a long history of activity in recreational boating. Her husband, Frederick, was a member of the first Board in 1966. Fred was instrumental in the development of the first comprehensive set of boating regulations in the Commonwealth. and Helen was right in there with him. Hailing from Sharpsville, Helen does most of her boating on Pymatuning Lake, where in 1950 she joined the Pymatuning Yacht Club and actively sailed Lightning Class boats. Helen was an active member of the U.S. Coast Guard Auxiliary and was elected vice flotilla commander in 1978, 1980, 1981, and 1982. She is also a member of the Pennsylvania Boating Association.

For information on the dates and sites of Boating Advisory Board meetings, check *Boat Pennsylvania's* "Calendar" column, or call the Fish Commission Bureau of Waterways at 717-657-4540.

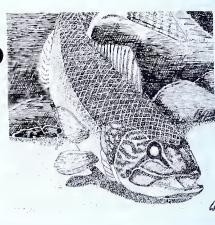
John Simmons is administrative officer of the Commission Bureau of Waterways.

Guccini Appointed to Boating Advisory Board

Leroy Guccini, of Greentown (Lake Wallenpaupack), PA, was appointed to the Boating Advisory Board last December. Mr. Guccini earned a bachelor of science degree from Penn State, and has served in the U.S. Air Force. He is a past president and director of the Lake Wallenpaupack Association, and he is director of the Pocono Mountains Vacation Bureau.

Mr. Guccini is also a life member and director of the Pennsylvania Boating Association, and he is a member of the Wallenpaupack Yacht Club.

Ohio River Walleye





by Thad Bukowski

This area of the Ohio River near Leetsdale has bottom pools where walleye and sauger linger. The best action occurs in late February and early March

Proad, silent, and swirling with scattered ice floes. A bit mysterious. Full of the kind of fish fillets that most folks favor. Walleye, wall to wall. No, not at some wilderness Canadian outpost.

For a tug, the "Nell" huffs and puffs. It pushes two huge barges upriver toward the Dashields Dam near Sewickley, PA. One barge is almost a half-mile away from our resting boat, but its wake rocks our

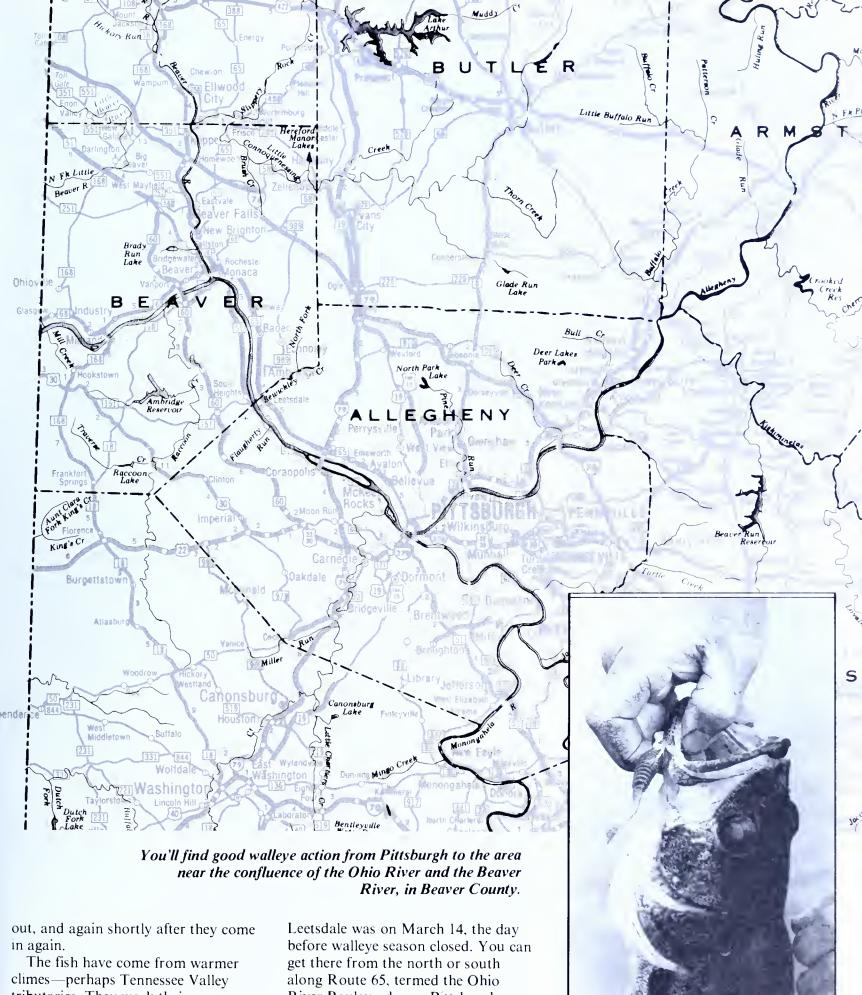
16-foot craft with repeated waves.

We are tossing spinning lines for walleye in the hottest region for this fish in the Commonwealth, outside of Lake Erie.

Almost shockingly, it includes the periphery of Pittsburgh. Our boat is on the little piece of the Ohio River that crosses southwestern Pennsylvania's Beaver and Allegheny counties and flows northward until

the Beaver River joins it, where the two then head into the Buckeye State.

We are at Leetsdale, but the lower Allegheny near Pittsburgh's Highland Park Zoo and the Monongahela are also producing these fish in stringersful. Big fish—fat walleye that fill the river gravel bars during this early spawning season. Most of the great fishing is in late February and early March before the scasons go



The fish have come from warmer climes—perhaps Tennessee Valley tributaries. They work their way through lock after lock, just as the big barges do, veering around the many dams they cannot climb but also through these locks which make the rivers navigable. The walleye began appearing some five years ago.

Our first trip to the Ohio River near

Leetsdale was on March 14, the day before walleye season closed. You can get there from the north or south along Route 65, termed the Ohio River Boulevard near Pittsburgh, or head along 1-79 to Warrendale, then south beyond the Turnpike access and take the Red Belt westward toward Leetsdale from an easterly direction.

The Fish Commission Leetsdale Access is along the Ohio River here and is easily accessible off Route 65.

This Ohio River walleye fell for a white jig with a motor oil action tail.



At the confluence of the Ohio and Sewickley Creek, anglers catch walleve, smallmouth bass, and big catfish.

Parking and turnarounds are available, but the river access shorcline can be a bit mushy, especially when it rains. Be cautious if you have a boat 16 feet or longer or one with some weight. Good tires on the pulling vehicle are a must, and carrying a towing strap could be helpful for those unexpected days when something might go wrong.

I fished the river with three others, in a two-boat group. By the time we maneuvered our craft with its 9½ hp motor onto the waters across from the Cheswick power plant (on the Allegheny River) at 10 a.m., the others had 12 sauger and walleye in the box. They started three hours earlier

My partner soon hooked a hefty fish. I knew suddenly that we had made a grievous error when I reached for but could not locate a landing net. The big fish broke off. Four more hefties tore loose before I put on a glove, grabbed a fish that my partner had on again, needle sharp teeth and all, and heaved it gingerly into the boat. It was big and full of roe.

My first fish turned out to be a sauger of about 14 inches, and we finally had five fish on the stringer before we left.

The sauger only differs from the walleye by having numerous spots instead of one spot on the dorsal fin, and it also has a marbled-color appearance. Six of these are permitted, in addition to any walleye take, and must be 12 inches, while a walleye has to be 15 inches. Rarely are sauger bigger than 14 inches, but perhaps they are even more delectable in the pan than walleye.

Jigs are moved very slowly along the bottom while fishing for both species here. Minnows and crawlers are also used in early season, while all types of small crankbaits, spoons, and spinners are good when the weather warms. Hot-n-Tots, Shadraps, Wigglewarts, and Model As all do well.

The preferred jigs are dressed with plastic twisters in lime, chartreuse, white, and green colors. Motor oil is perhaps the hottest color for the plastic worm imitations, and 3-inch to 4-inch worms are preferable with the jig.

The fish hit almost imperceptibly during the cold seasons, and any tiny tick at the end of the line that seems like a drag over rubble should be considered a strike and the hook set quickly and hard. It will often be a hefty fish.

Industry has gone and steelworkers suffer, but anglers are now experiencing this fishing bonanza. Perhaps a poor exchange, but it does indicate dramatically that man's

industrial world and its pollution detrimentally affect life over wide spans, even in such huge waterways. Now that the chain of life-giving microorganisms and oxygen has been restored, and minnows and crayfish are also available as food, the big fish have come again.

Goading us to come back a second time was a nearby companion angler who told us that he limited out three times the week before while fishing ice floes.

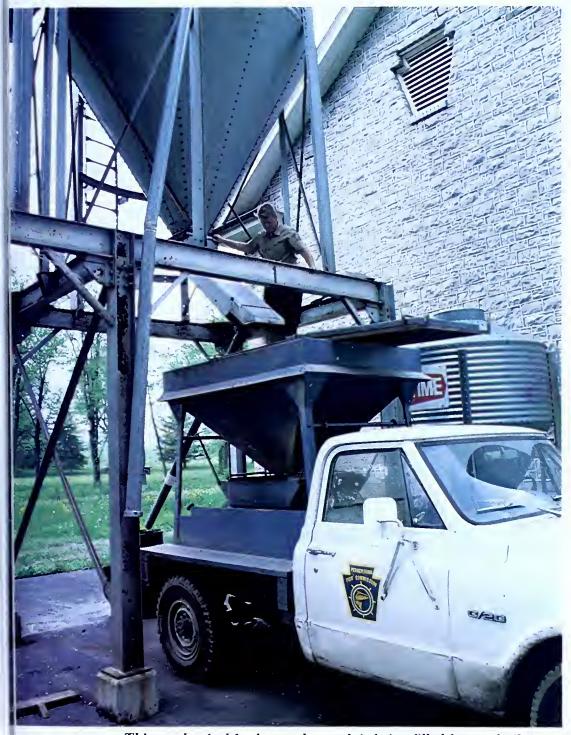
"I had to fight some of the big ice cakes, but the walleye were really cooperative," he commented, with a big grin on his face.

During the warmer months, smallmouth bass hit as readily on the same baits and fight in more determined fashion. Huge river catfish are coming in also, and one angler even took a 12-pound, 36-inch muskellunge while fishing the western shore one day. Both he and other fishermen have caught nearly a dozen catfish, each going between 7 and 8 pounds.

Nevertheless, we adjusted readily to our first Ohio River net-forgetting day, and both times out we had enjoyable experiences, sunfilled with suggestions that a warmer, more delightful spring was soon approaching, and another great fishing spot was opening to us all. Consider what's really involved in feeding hatcheryreared trout, and all the Commission does to ensure their growth and good health.

Trout Are What They Eat

by Kenneth G. Corl



This mechanical feeder on the truck is being filled from a bulk bin.

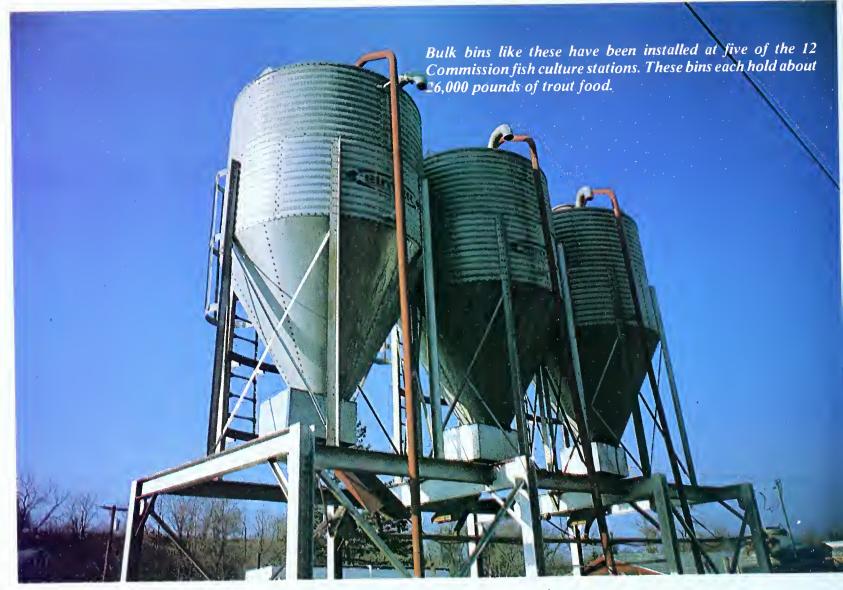
new life has just burst from a trout egg in the fiberglass incubator at the Big Spring Fish Culture Station. This grand event could be repeated seven more times around the Commonwealth as tiny trout hatch under similar circumstances. The announcement gives the fish culturist from two to three weeks to begin preparations of another cycle of feeding fish for the 15-month period that they remain domesticated trout at the fish culture station.

The following information isn't exactly common knowledge among trout anglers, but the insider's view on the unusual subject offered here may interest most trout fishermen.

Actually, the tiny egg sac visible at hatching time provides the trout with its dietary necessities for a two-week to three-week period. Water temperature determines the period of time necessary for the absorption. Incubation temperatures are normally 46° F. to 54° F.

Following button up (absorption of the egg sac), the tiny trout is ready for the first hand-fed meal. This usually consists of a finely granulated dry particle that is 48-52 percent protein, 17 percent fat, and 3-4 percent fiber. Because the digestive tract of a trout is quite short, the critter is capable of consuming only one percent of his body weight at a feeding.

Most infants require frequent nourishment, and the little trout is no different. The suggested frequency to feed trout at this size is 6-8 times daily. For a

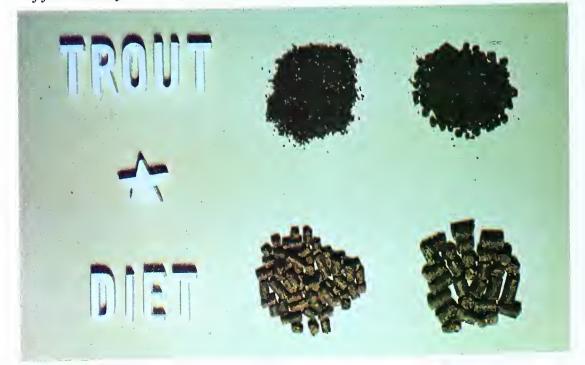


more precise picture of what occurs, this little trout is about one inch in length and consumes about 200 particles of food (about 3.8 million particles in a pound) totally during an eight-times-a-day feeding regime. Naturally, particle sizes increase and frequency of feeding decreases as the trout grows.

Evidence of this change can be

observed as the diet, as well as the particle size and frequency of feeding, occurs when the trout reaches $2\frac{1}{2}$ inches. These trout are fed 3-4 times a day from a diet containing 45 percent protein, 13 percent fat, and low fiber. Particle sizes vary from 256,306 per pound for the $2\frac{1}{2}$ -inch trout to 75,253 per pound for the 4-inch trout.

Trout diets are formulated and sized to meet the requirements of the various sizes of fish. These foods are fed to trout that are four inches long and larger.



Grower formula

Infant and childhood diets are now behind the growing trout, and from 4 inches and up the trout receives a grower formulation. This diet has the protein reduced to 36-38 percent, the fat reduced to 8 percent, and fiber increased to about 5 percent. Frequency of feeding is reduced to once or twice daily, and by the time a trout reaches 9 inches, the feed size has increased to where the fish can handle food of about 7,500 particles per pound.

Normally, we don't look at the food we eat as being 14 percent protein or 17 protein or having 7 percent fat. Many of us are concerned about calories, but when we discuss what we eat, we speak in terms of meats, vegetables, and fruits. To put such a discussion in these terms relative to the trout's diet, we would need to review a trout diet formulation.

Certainly, the formulation of a diet contains different proportions of particular ingredients, depending on whether the recipient is an infant or a child, or growing into adulthood. The

photos by Russ Gettig

diet of the trout is no different. The starter diet, for example, contains 40-60 percent quality fish meal, 10 percent dried blood flour, 10 percent dried whey, and 3 percent condensed fish solubles. All the above are animal proteins. The trout is capable of digesting animal proteins more readily than vegetable proteins, so a diet of this type would be expected.

Only small quantities of wheat middlings and soybean lecithin are incorporated into the starter formulation. Additional limited quantities of vegetable proteins are added as the trout approaches adulthood. Included in these vegetable protein ingredients are soybean meal, gluten meal, and alfalfa meal. A vitamin and mineral pack is also added to all diets to ensure that adequate vitamins, minerals, and amino acids are available for the trout's well-being.

Trout are very efficient converters of food to flesh. A good conversion is from 1.5-1.75 pounds of food to produce a pound of trout. This figure compares very favorably with 4-6 pounds of food to produce a pound of beef, 3.2-3.5 pounds of food to produce a pound of pork, and 2.6 pounds of food to produce a pound of duck.

The trout's diet is the softest of all animal foods and must be handled very

carefully to avoid crumbling and fines (the smallest dust-like particles in the trout's food mixture). The latter is lost except in the case of our bulk bins where screening devices remove the fines. Rather than ending up in the trout's environment, the fines are returned to the vendor or manufacturer to be recycled into edible pellets. Fines introduced into raceways cause a reduction in the available oxygen because they decompose and increase the amount of non-desirable ammonia in the water. Tolerable fines permitted from the manufacturer is 3 percent in bagged feed and 5 percent in bulk feed. Normally, fish food is not stored in either bulk or bags for more than a 90-day period. Oxidation occurs and vitamins and amino acids vital for the welfare of the trout are reduced. Cool, dry storage is preferred to prevent these losses, and in addition, inhibit the development of

Supply and demand

The law of supply and demand affects the price of fish food just as it does the price of food, fuel, and clothing. The abundance of fish meal and/or soybean meal plays an integral part in determining the price of fish food. In January 1981, grower pellets escalated to 22.5 cents per pound as a result of the poor harvest of anchovies off the coast of Peru and a difficult season for harvest of sovbeans in the central United States. The more recent surplus of grain on the world market has depressed protein prices, and grower trout diets are approximately 50 percent of the 1981 cost.

Feeding the 5 million adult trout that the Fish Commission stocks annually requires 100 tractor trailers (22 tons per load) of feed. The budget for feeding these trout represents 17 percent of the total propagation budget. This 17 percent figure is identical to what most Americans spend from their budgets to feed their families.

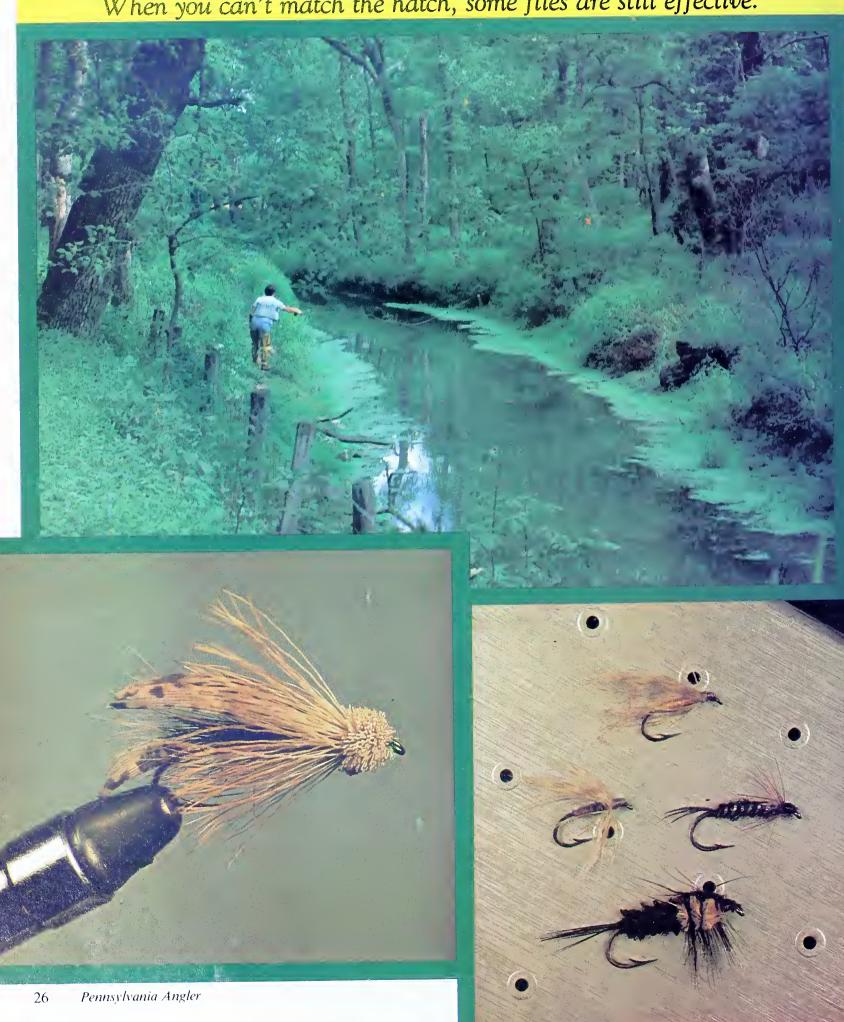
All in all, the next time you go fishing and land a stocked trout, you'll have a better idea what went into the composition of its body during the 15 months it spent at one of the Fish Commission fish culture station's raceways.



Kenneth G. Corl is chief of the Commission Division of Fisheries Trout Production Section.

No-Hatch Flies

When you can't match the hatch, some flies are still effective.

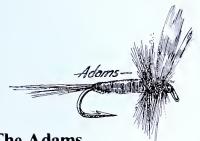


by Mike Sajna

lies are the most important, involved pieces of equipment used by the fly fisherman, and more volumes have been written on how to tie, select, and present the proper fly than on any other aspect of the sport.

Novice anglers often get caught up in the mystique of fly pattern selection, focusing so much on "matching the hatch" that they forget all about using flies in any other manner.

Matching the hatch may be the most reliable way to catch fish, especially trout, on a fly. However, hatches do not always follow a schedule, and as a result, anglers who set their sights only on matching the hatch usually end up spending a lot more time standing around waiting than fishing. So what should you do on a stream for only a couple of hours when there is no hatch coming off?



The Adams

Under such conditions, most experienced fly fishermen use a few favorite patterns that have produced for them in the past. Perhaps chief among these old dependable patterns is the Adams.

Developed by Michigan fly tier Leonard Halliday in the 1920 s, the Adams is one of the most effective fly patterns ever tied. Although it was originally designed to simulate either the deer fly or a gnat, its grayish-blue body and salt-and-pepper hackle make it a fairly good imitation of about a thousand insects found on North American waters. Many anglers think so highly of the Adams that they fish almost nothing else when it comes to dry flies.

Another productive dry fly to try on hatchless days is the Irresistible.

Exactly what aquatic insect the Irresistible was meant to imitate is as cloudy as its origin, which points to both Joe Messinger of Morgantown, West Virginia, and Catskill, New York, tier Harry Darbee. The

Irresistible may have been meant simply to resemble a tempting mouthful, something that, because of the large sizes in which it is tied, 6 through 12, it certainly does.

Both the Adams and Irresistible are best floated over submerged logs, along grassy or undercut banks, and under overhanging trees.

Soft-hackle flies

Where subsurface patterns are concerned, some of the very best are also the very oldest—the soft-hackle patterns.

Dating back to 15th century England, soft-hackle patterns have enjoyed a resurgence in recent years, thanks to Sylvester Nemes and his book The Soft Hackle Fly Addict. These flies can be tied with dubbed fur, floss, or herl bodies that make them suggest an almost countless variety of emerging caddis flies. They are excellent choices for blind casting on unfamiliar waters. Try them in sizes 12 through 16, and work them through a series of wet-fly swings.

Muddler Minnow

The Muddler Minnow, original name "Cock-A-Tush," is one of the most versatile streamer patterns of all time. Designed to imitate the common sculpin, a forage fish found in many Pennsylvania waters, the Muddler Minnow is also a good pattern to try in waters with large populations of dragonflies. Its size and mottled coloration make it resemble many nymphs of that species.

Although the Muddler is primarily meant to imitate a baitfish, a siliconegreased version can also be used as a grasshopper. Tied in sizes 4 to 10, the Muddler is a good fly to use on streams with large populations of brook trout.

Black-nosed Dace

Another streamer or bucktail pattern that no fly fisherman should be without is the Black-nosed Dace. Developed by Art Flick, author of A Streamside Guide, the Blacknosed Dace is meant to imitate the dace minnow, like the sculpin, a widely distributed baitfish.

Streamers and bucktails are some of the best flies for randomly fishing a stream. Fished in concentric downstream swings, these patterns let

you cover large areas of water. They are also effective fished across stream, through pockets of water, and near submerged debris.

Stoneflies

On waters known to contain stoneflies, both the Montana and Ted's Stonefly are good choices.

Many stonefly nymphs spend between two and three years in the water before hatching into adults. Because there is always more than one generation of stonefly nymph in the water at any one time, a well-stocked fly box should have both patterns in sizes 2 through 10.

Except for color (the Montana is black and yellow; Ted's Stonefly is brown and orange), the two patterns are basically the same. Still, color can sometimes make the difference, so be sure to have a few of each along.

In streams with a mixed population of mayflies and caddis flies, a good nymph to try is the Zug Bug. By varying the hook size and its body shape by using peacock herl with short or long fibers, the Zug Bug can be made to resemble any number of swimming or crawling mayflies or caddis larvae. It is often effective combined with a riffle and the day's last light.

Terrestrials

Terrestrials are a good solution to many slow days. Ants, both black and brown, are particularly good. Research has shown that ants play an important part in a trout's diet, and even more, trout seem to look on them as some sort of treat.

Ant patterns can be tied in a variety of ways in sizes ranging from 22 to 12. Stream stretches overhung by trees are among the best places to try ants.

The patterns mentioned here are a sampling of the flies that will take fish on no-hatch days. Many anglers have other choices that they think should be added to the list, and they are correct. No fly fisherman should forget about the Wooly Worm, Humpy, Mickey Finn, Royal Coachman, and bivisibles, to name just five more. All these patterns have withstood the toughest test of all time—and take fish during the most important time of all: whenever an angler can be on a stream, even if nothing is hatching.

ANGLERS CURRENTS

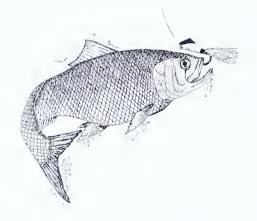
Correspondence Tip

If you ordered subscriptions, publications, and other items from the Fish Commission, and if you need to correspond with the Fish Commission about your order, be sure to include in your letter the 7-digit number on the back of your cancelled check. This number appears directly below the stamp, "Pay to the order of the state treasurer."

Bumper Sticker — Boat Decal — Truck Decal

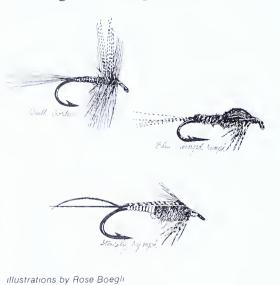
The Fish Commission has available colorful decals that measure 5¾ inches by 4 inches. You can use them as bumper stickers, boat decals, truck decals, or place them on your tackle box and other gear. These decals are free, but please include with requests a business-sized stamped, self-addressed envelope. Contact: *Angler* Decals, Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

Anglers W Saw Ederett



Are you anticipating next month's shad action? Spool up with fresh line. American shad are dazzling, powerful fighters, and they don't quit. You could easily break off a nice fish on old line.

Early in the season, you might find trout stream insect hatches of Quill Gordons and assorted caddises. A dark stonefly nymph in sizes 6, 8, or 10 could produce fish, and for dry fly action, a little blue-winged Olive might work.



Ultralight spinning gear is ideal for trout fishing. Go with 4-pound-test line, and offer the fish a variety of tiny spoons, spinners, plugs, minnows, and worms. Minnows and worms fished on ultralight spinning gear have accounted for many early season trout.

For sucker fishing this month, use medium-action rods in the 5½-foot to 6½-foot range, and spool up with 6-pound-test mono.

Beware of water getting into your reel during cold weather. If the water freezes, your reel won't work.

Inspect your trailer carefully when you're ready to haul your boat. Inspect all rollers and other places where the boat is supported. Be sure the wiring and lights work, and that your tires are in good shape and are inflated properly.

Baitholding hooks in sizes 8 to 12 are good for fishing worms for trout. A dead drift with as little weight as possible gives the worm a natural look.

If you're performing your own outboard motor maintenance, don't use automotive parts in your boat. Even though boat engine parts are expensive compared to automotive parts, there are major differences in the environments in which they were designed to operate. Automotive parts in your boat engine could cause fires and explosions.



Dedicated to the sound convation of our aquatic resourthe protection and managem of the state's diversified fisher and to the ideals of safe boar and optimum boating opport

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The Law and You

by Perry D. Heath

Q. If I lose my fishing license, must I pay the full price for a new one?

A. No. In case a license certificate is lost or destroyed, a new license may be secured from the Commission or from any issuing agent upon making affidavit to that effect and paying a fee of \$1 plus a service fee of 50 cents to the issuing agent.

Q. My friend and I use nets larger than 4 square feet and 4 feet in diameter for fishing in salt water. My friend advises me that I am in violation of the Pennsylvania Fish and Boat Code by having these nets in my possession in Pennsylvania. Is he correct?

A. Your friend is not correct. It is unlawful for any person to make, sell, or have in his possession a net larger than 4 square feet or 4 feet in diameter when the person is within 25

feet of Commonwealth waters or on Commonwealth waters. Many stores now sell large nets for home decorations and for use in states permitting them.

Q. My uncle has a large family farm pond. May I fish through the ice on his farm pond using tip-ups?

A. Yes. You may fish in your uncle's farm pond with tip-ups, but you may not use more than five tip-ups and they must be under your immediate control.

Q. We have a fishing camp on the Delaware River and I notice a number of spear fishermen taking large catfish with their spears at night. Is this legal? A. Yes. On the Delaware River, herring and catfish may be taken using long bow and arrow or spear or gig, except within 275 yards of an eel weir.

Q. There are some fish attractors now on the market for spraying on a lure or for dipping a bait into a container of attractant. May I carry a small cannister of this material for my artificial flies on specially regulated waters, such as fly-fishing-only and delayed harvest, fly-fishing-only areas? A. No. The use or possession of any

natural bait, baitfish, or fishbait, and the use of any other device, natural or synthetic, capable of catching fish other than artificial flies and streamers is prohibited.

Perry D. Heath is deputy chief of the Commission Law Enforcement Division.

PLAY Sponsorship

The Pennsylvania League of Angling Youth (PLAY) is an educational program that has taught thousands of Keystone State kids about fishing, boating, and conservation since 1980. Still, thousands more children haven't discovered PLAY. With your help, though, they can.

Individuals, organizations, and businesses can now become supporting members of PLAY by sponsoring 10 or more \$2 memberships for children. For complete details, contact: PLAY, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. With requests please include a stamped, business-sized self-addressed envelope.

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'Notes from the Streams"

Erie takes a pounding

The weather on the first day of the 1985 buck season was not only a problem for the hunters of Pennsylvania. The 50 mph winds and water levels that registered over three feet above normal gave the Fish Commission some problems, too. With waves as high as 15 feet, the waters of Lake Erie washed over the Walnut Creek Access Area leaving large mounds of sand and driftwood over the parking lots. We were fortunate that the buildings didn't sustain any damage. The folks on Kelso Beach were not as lucky. Many cottages there were heavily damaged by the waves and water. Presque Isle was closed for 4 days due to the sand, as deep as five feet, that was washed onto the roadways. One of the houseboats moored in Horseshoe Pond broke loose from its anchor and was found aground in the parking lot. Driftwood and trees that had been blown over by the high winds littered the entire peninsula. The city of Erie didn't fare much better with the high water flooding much of the bay front. But even with all the problems Mother Nature created here in Erie, the fishermen and boaters of Pennsylvania can be sure that we will be open for business as usual next summer.—WCO Frank Parise, westcentral Erie County

Apartment complex

Assistant Supervisor Gary Moore and I were recently in the Harrisburg area serving warrants for non-payment of fines. As usual, we found some people we were looking for, while others we did not.

Gary and I went to one address only to have the gentlemen's wife tell us that he was at the store. After getting directions, we went to the store to talk to the man, whom we had never met. An employee said, "He had just gone to the garage but would return shortly." A short time later, we returned to the store and went inside to talk to the same employee, noticing another individual by the cash register. While waiting to talk to the clerk, the man at the cash register asked if we were there about the fine. I stated that I needed to talk to



Last December, Fish Commission Area Fisheries Manager Larry Jackson (right) received the 1985 Will Johns Award from Stu Tinney (left), editor of Striper Magazine. The award, which consists of a plaque and a check for \$200 to be used to remember Will Johns, is offered annually to a deserving conservationist. Will Johns, former director of the Fish Commission Office of Information, is memorialized by the award's name for his work in the conservation field. Jackson donated the money to the Pennsylvania Outdoor Writers Association Will Johns Memorial Scholarship Fund.

so-and-so about this matter. At this point, he said, "I have instructions to pay you the fine." While completing the receipt, I mentioned that we were at the apartment. The man expressed surprise, saying, "Oh, you were at the apartment." After receiving the fine and providing the receipt, I asked, "Are you so-and-so?" He replied, "Yes."—WCO Larry Boor, Cumberland County

Bridges may be slippery

While patrolling last year between March I and the opening day of trout season, when stocked streams are closed to fishing, I encountered three male juveniles fishing illegally. They ran as I approached, and their escape route took them across the stream via a log bridge without railings of about 12 feet in length. The logs had become watersoaked from recent rains and were extremely slippery. All three violators, after hitting the bridge at full speed, were unable to keep their footing. They piled up in sequence on the opposite side, shaken but unhurt, and were easily apprehended. - WCO Bud Flyte, Somerset County

Doctoring for the birds

While on assignment in Erie County during the 1985 coho run, I had the rare opportunity to provide avian surgery. DWCO Ron Wygant and I were walking along the Lake Erie shoreline when we noticed a seagull fruitlessly trying to get airborne. Closer inspection revealed that the gull apparently mistook a floating Rapala lure for suitable quarry and became disabled with one treble hook in its bill and the other hook in a foot. Ouick action was to the bird's fortune as it immediately resumed its aerial fishing efforts, once "surgery" was completed.-WCO Brian B. Burger, southern York County

1985 apprehension figures

The Fish Commission Law Enforcement Division has reported the totals for apprehensions in 1985 of violations of the fishing and boating rules and regulations.

The highest number of violations occurred for fishing without a license—some 2,944 apprehensions. Apprehensions for littering totaled 1,343.



Last fall, this group of young anglers pictured here was presented with Fish Commission Junior Angler Awards at the annual Port Matilda Sportsmen's Club dinner (Centre County). Pictured left to right (back row) are: George Jackson, Brad Stauffer, Tom Seeger, Scott Houtz, Bob Herman, Ted Enos, and Jack Bonsell (Port Matilda Sportsmen's Club president). In the front left to right are Matthew Westley, Richard Nearhoof, and Robert Stauffer.—

George Jackson, Fish Culturist, Bellefonte Fish Culture Station

Some 738 apprehensions were made for violations of seasons, sizes, and creel limits, and 437 apprehensions were made for violations of fishing in approved trout waters.

Under the heading of general boating regulations, the highest number of apprehensions was for some violation concerning personal flotation devices—1,502. The next most frequent violations were unacceptable boating practices (261) and minimum wake speed (240).

Fines collected for prosecutions totaled more than \$320,000.—Perry D. Heath, deputy chief, Law Enforcement Division

Safety stories

These occurrences may be humorous at times, but I make no attempt to poke fun or take lightly the seriousness and potential danger that they contain.

In 1968, a boat full of people was cruising down the Ohio River near the town of Beaver. As part of our routine duty, we stopped the boat for a safety equipment inspection, which always includes a check of all PFDs, fire extinguishers, lights, sounding devices, etc. This group was a family outing with mom, dad, the kids, and grandpappy. I recall very vividly the big smile on

grandpa's face because it turned to a look of bewilderment when I asked, "Are you mad at grandpa?"

"No, why?" was the response from everyone on board. I couldn't believe my eyes! There sat grandpa with a cushion type PFD strapped to his back. The whole family was grateful when I told them that this would put poor old grandpa's face down if he entered the water without warning. Frightening!

The next incident took place during coho patrol on Lake Erie in the late 1960s, before the law requiring PFDs on non-powered craft. Knowing how quick Lake Erie can turn from a placid mirror of serenity to a violent raging monster, I still get a chill thinking of this one.

About a half-mile off the shore of Trout Run, our patrol boat encountered two couples in an old, rather antique-looking wooden boat of about 16 feet in length, powered by oars. That's right, I said oars! In those days, we called PFDs LSDs, or livesaving devices. We went alongside and greeted the couples with a, "Hi, how's the fishing and may we see your lifesaving equipment?" One man replied, "We don't need any, we don't have a motor!" I couldn't believe my ears or my eyes because the one woman was approxi-

matcly six months pregnant. I shook my head in disbelief and said, "You're right, by law you don't need any!" We checked their fishing licenses and recommended that they go closer to shore to fish—we didn't have the authority then to insist that they go ashore.

Before leaving Lake Erie, let me relate an early morning happening at the Walnut Creek Access. The wind was really howling and the lake was kicking about 6-foot swells, and huge waves were smashing with tremendous force against the rocks. Dozens of boats better than 20 feet in length were never taken from the trailers because their owners knew better. Along came this fellow with a 12-foot cartop boat. When he asked us if we thought it would be safe to go out, we answered, "Pal, it's too rough to take the patrol boat out to look for your body!" With a look of fright, the man climbed in his car and left hastily.

At this same ramp, I saw many fishermen who were stricken with "coho fever" forget to remove their hip boots after launching their boats. A quick, "Hey fellow, better take 'em off!" was always answered with a blushing, "Oh, I was going to!"

Do you know what happens if you capsize with hip boots on? You either go to the bottom like a rock, or your feet go straight up and your head goes under water. Either way, you're in a bad, bad situation.—WCO Don Parrish, McKean County

Cost of a license

I just returned home from a 10-week stay in Europe, and if you think we have to pay a lot for fishing in Pennsylvania, consider the fishermen in Great Britain and Ireland. First, you must buy a national license for \$14.50. This entitles you to fish public water, but there are no public streams or rivers, only ponds and lochs. If you want to fish a stream, you must contact a landowner or a club and pay an additional \$10 for a season ticket. Fish two streams, then it will be \$20, and so on. The average fisherman in these countries pays between \$40 and \$50 per year, and the scason is six months.

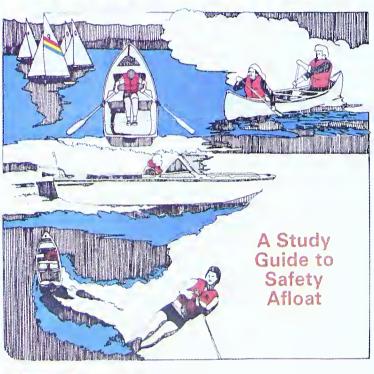
This is quite a difference for \$12.50 and a year-round season in our state. So, the grass may be green but not greener.—Godfrey Studenmund, Volunteer I & E Corps, information representative

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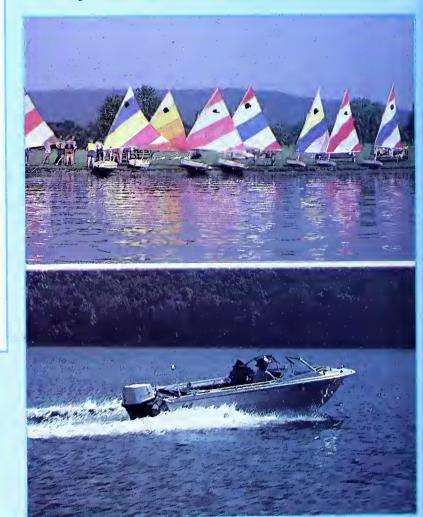


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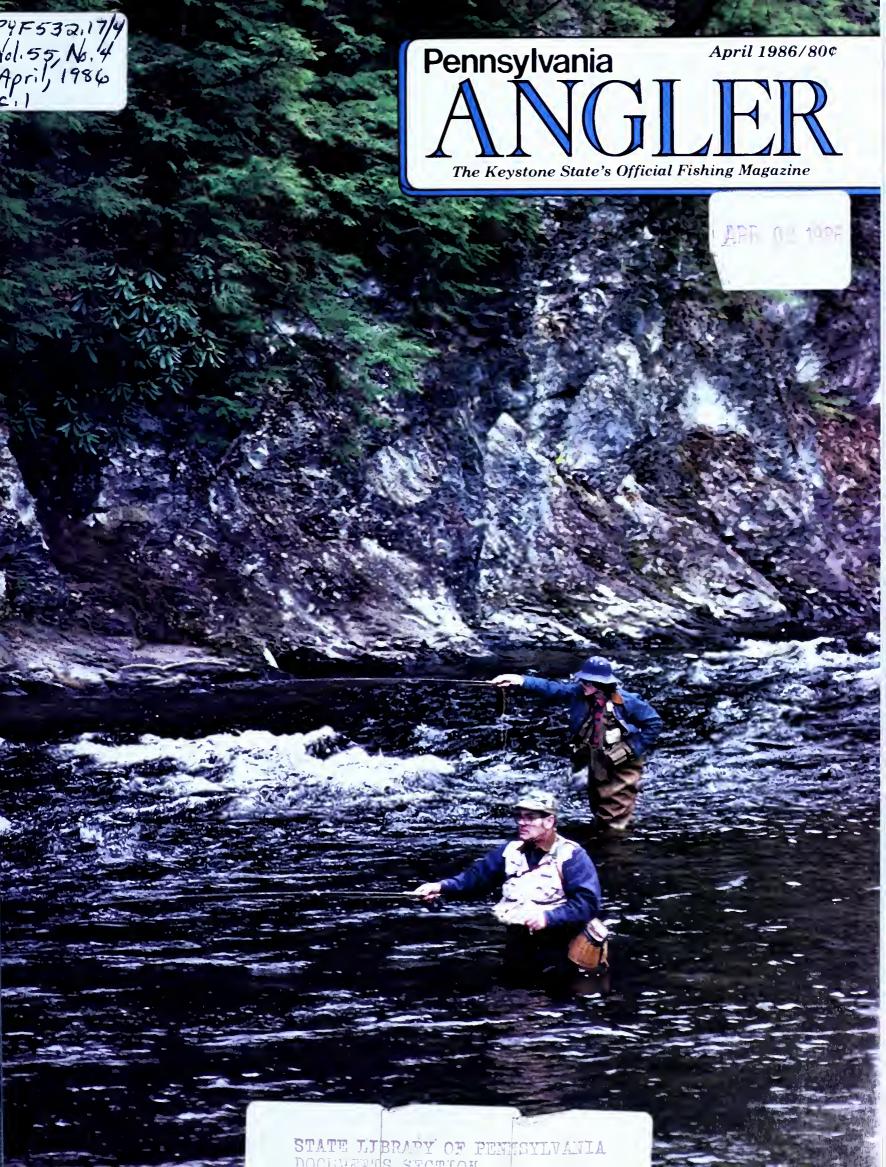
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Pennsylvania Basic Boating is the Fish Commission's 84-page book on the rudiments and requirements for all Commonwealth boaters. The book's 26 chapters detail information on boat types, equipment, navigation, safety, emergency measures, and a skipper's duties. This book is available for \$1 postpaid. Send requests to: Boating, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. Make checks or money orders payable to Pennsylvania Fish Commission.



You have a fishing friend in Pennsylvania



Straight Talk

ACID RAIN



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

At its 169th meeting on January 18, 1986, the Pennsylvania Fish Commission, finding that sufficient studies have been conducted that have determined the cause and effect of acid precipitation, unanimously resolved to go on record with the United States Congress, the Pennsylvania General Assembly, as well as the executive branches of both the Commonwealth and the nation, requesting that immediate action be taken to reduce sulfur emissions and NO^X and abate acid precipitation in accordance with the recommendations of the National Academy of Science.

That resolution, by publication in *Pennsylvania Bulletin*, is actually an order adopting a statement of policy. The order is rather lengthy, but in summary it states that man-made emissions of sulfur dioxide and the oxides of nitrogen are widely recognized by the scientific community as being responsible for the acid deposition that now occurs over much of the United States and Canada. The National Academy of Science, the National Commission on Air Quality, the Office of Science and Technology Policy Panel, the U.S. General Accounting Office, the Congressional Office of Technology Assessment, the U.S.-Canadian Memorandum of Intent, and the Stockholm Conference on Acidification of the Environment have all reviewed this matter and reached similar conclusions on the cause of acid deposition.

Since 1965, 5,000 miles of Pennsylvania's highest-quality trout streams and scores of lakes have become vulnerable to acidification, having lost approximately 50 percent of their buffering capacity over this short time period. A continuation of the current acid deposition rate and loss of buffering portends the possible permanent loss of recreational fisheries and many of these vulnerable resources by the end of this century.

Acid deposition has significant adverse impacts on our nation's forests, crops, structures, drinking water, and human health, and annual costs of these adverse impacts far exceed the cost of emission controls. These effects are cumulative to such an extent that they are probably reversible within a human lifespan.

The order indicates that it shall be the policy of the Pennsylvania Fish Commission to urge the Congress and the president to take prompt and decisive action to enact a new Clean Air Act to reduce emissions of sulfur oxide and NOX by 50 percent in the eastern half of the United States by the year 1993, as recommended by the National Academy of Science.

We have already contacted the Pennsylvania Delegation of the Congress and Senate, as well as all members of the General Assembly, the President, the Vice President, key cabinet members in the federal government, the governor, the lieutenant governor, and key members of the governor's cabinet. We have called on the Commonwealth as the Keystone State in this national issue to take a leading role by enacting a unilateral 50 percent reduction in sulfur dioxide and NOX emission from Pennsylvania sources.

In summary, we still consider acid deposition to be the single most chronic insult to the resources of this Commonwealth, and at least to the eastern part of the nation, and we urge the support not only of the policy makers, but the public, to support us in getting something done instead of putting up with more studies as another delaying tactic.

It's later than it's ever been.

Falk W. Phele

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The Cover

This month's front cover picture, taken by Allen G. Eastby, shows opening day anglers trying their luck on the lower stretch of Big Bushkill Creek, Monroe County.



by Darl Black

Lake Arthur and was already looking forward to next weekend's fishing trip as he guided his boat into the backyard and disconnected the trailer from his pickup. In his routine manner, he checked the chain that locked his recently acquired outboard to the 14-foot aluminum fishing boat, secured the trailer to a post with another chain and lock, and then carried his depthfinder and tackle into the basement.

He thought his investment was safe with these precautions. His previous boat had sat in the yard over several seasons without any problems. After all, even if the unexpected should occur and his rig should be stolen, his insurance policy would cover it, right?

Thursday evening, with visions of leaping bass in his mind, David decided to cut the grass to eliminate this chore from interfering with his planned weekend fishing. While making the initial pass with the mower in the backyard, he looked over to admire his boat. Something didn't look quite right. His outboard motor was missing!

Sometime during the week, probably late at night, thieves had apparently used a bolt cutter to make quick work of his security system. The shock of losing his motor was compounded when he later learned that his homeowners insurance would cover only up to \$500 toward replacement of the \$1,000 outboard.

Dave's experience is not unusual. Thefts of canoes, small boats, trailers, and outboard motors are actually a frequent occurrence in Pennsylvania, because anglers don't secure their equipment well enough, and in many cases, the victim finds out too late that his insurance is not sufficient to cover the value of the items taken.

Insurance coverage

When an individual invests thousands of dollars in a fancy bass boat, ski craft, or runabout, he seldom fails to insure the rig and take precautions against theft. However, the owner of a less expensive small boat and motor often neglects to

acquire proper insurance and to take adequate theft precautions. Few people believe that someone is interested in stealing a small rig when so many more expensive ones are available. It is a mistake many owners regret.

The combination of boats 16 feet long or shorter with a 10 horsepower or smaller outboard is the most popular fishing rig in our state. The average owner may mistakenly believe that homeowners or renters insurance automatically covers a small boat and motor. A check with my insurance agent verified that most homeowners/ renters policies place a limit of \$500 for "broad form perils," which include theft, on a boat and accessories. This \$500 limit is imposed regardless of the actual value of the stolen items and is in effect only when the boat and motor are situated on the home premises.

If you own a boat—any boat—you may want to look into a separate boat owners policy. Most insurers only permit the boat, motor, and accessories to be insured at "actual cash value" rather than replacement cost. Actual cash value is the market value or worth of the boat and/or motor when stolen.

Your boat policy should also include protection coverage for theft or damage occurring away from home. When purchasing an insurance policy, be sure to get the coverage you need.

Security precautions

Insuring your equipment does not prevent it from being stolen, but it may give you peace of mind that your rig is properly insured. Still, keep in mind that thieves depend on removing an item quietly and quickly without being seen, and with little chance of the stolen item being identified later. There are steps to take to foil thieves in both areas.

Keep your rig in a locked garage, if possible. This keeps your equipment out of sight of prying eyes. If you must store your boat in the yard, do so in an open, well-lighted area; keep it out of the shadows. You may consider investing in a "dusk-to-dawn" security light, if you live in an area of frequent thefts.

Use locking devices that are not easily cut or pried apart. Chain the

boat or trailer to a permanent structure such as a post anchored in concrete. The use of two chains or locking devices increases the time a crook must spend freeing your property, and therefore decreases the likelihood of a theft attempt.

Storing your outboard in the garage, basement, or enclosed porch is certainly worth the additional hassle of removing it from the boat after each outing. Of course, leaving valuable electronic equipment on a boat stored in the yard is an open invitation to any one with larceny on his mind.

When traveling with your boat, use a lock rather than just a slide-through pin to secure the trailer coupler to the ball on your vehicle. At restaurants and other stops, always park where you can keep an eye on the boat.

Another useful idea is to remove one trailer wheel and lock it in your car trunk. Prop up the wheel-less trailer side. This strategy discourages a thief from driving off with your trailered boat.

Along these same lines, you may want to run a chain through both trailer wheel hubs, locking the chain in place. This ploy also discourages a thief from driving off with your boat and trailer.

Operation Identification

Those who choose to leave a boat and motor at a weekend cottage or private lakeside mooring run the greatest risk of theft. Motors of 10 horsepower and less are particularly attractive to thieves.

"I may have one or two fishing boats reported stolen each season in my district, but outboard motor thefts are a real problem," comments Warren Beaver, waterways conservation officer for western Crawford County. "There have been as many as 25 10 hp motors taken from boats moored around Pymatuning Reservoir in a single season."

Pymatuning State Park, with its 10 hp limit, caters to the small-boat enthusiast and has over 1,200 boats moored at shoreline sites. Speculation on the disappearing motors runs from casual "theft of opportunity" to the possibility of an organized crime ring that moves the small outboards to other areas for resale.

Recently the State Police, the Fish Commission, and state park officials have been cooperating in "Operation Identification" to reduce the threat of boat and motor theft in the area. Throughout the summer during scheduled dates at area marinas and at the park office, an individual may have his motor, boat, and accessories engraved with a personal identification number.

According to the State Police, all too often an individual fails to record and safely tuck away his motor's serial number. Should the item be stolen, the victim can't provide the necessary information to the FBI's National Crime Information Center (NCIC).

But when an owner has his equipment engraved under Operation Identification, the State Police record all pertinent data, including serial numbers, on a file card. The engraving is accomplished with a small electric device that imprints the owner driver's license number in an inconspicuous place. A crook would not know where to look for the personalized engraved number, and therefore could not alter or change it as he might do with a motor's serial number or boat's hull identification number.

Operation Identification serves several important purposes. First, the publicity about engraving acts as a deterrent to theft, and second, if the property is stolen, all the required information is on file with the police and can be entered in the NCIC computer. Last, the ID number provides an accurate identification that the property is stolen if found in someone else's possession.

Engraving is available at State Police barracks through the Crime Prevention Officer. Contact the station nearest your home for details.

If your Pennsylvania-registered boat is stolen, you are required to file form PFC-732 with the Fish Commission within 15 days. Thefts of trailers, motors, and non-registered boats need not be reported to the PFC. Always report immediately any theft to the local law enforcement authorities.

By following the ideas in this article and exercising reasonable caution, you will likely not share in the unfortunate experience of a missing boat, motor, or trailer.

Fishing Spinners for Big Trout

by Mike Sawyers

photos by the author

The trout season was only two hours old, but the rainbows were acting as if they had years of experience.

How else could you explain the fact that the fish were holed up on the other side of a huge, submerged boulder that made it impossible to drift a bait, work a spinner, or cast a fly anywhere near them? Forget about wading to the other side of the stream. That shore was a sheer rock cliff that plunged in a concave fashion into water that would be over even a tall fisherman's head.

The other anglers who had been fruitlessly working the same stretch of river soon tired of the effort and looked elsewhere for their sport.

With a little more elbow room with which to work, I pulled out a red and white bobber, and tied the bobber about three feet up the line from the lightweight spinner/fly that I favor for trout. In addition, about one foot above the hardware was enough splitshot to sink rapidly, even in the swift current.

The rig was a bit ungainly, but it worked. Here's how. Tossing the bobber/spinner combo well upstrcam from the trout allowed the splitshot to sink rapidly and drag the spinner along. Of course, the float kept the lure from reaching the bottom where it would snag, as had many spinners and bait hooks that morning. I was using a lightweight spinner that has a blade that revolves if you even *look* at it. Consequently, the drag created by the bobber and splitshot was enough to make it spin, and enough to make the trout grab it.

I admit, because of the angle created in the line, I had to set the hook mightily, but I caught trout that would have been otherwise unavailable to me.

The unorthodox methods I used that morning prove that there is more than one way to use a spinner to catch trout. Here are a few others.

Upstream fishing

Mark my word, the next time you go trout fishing, watch the hardware anglers and you will notice that most are casting their spinners across or downstream.

Finc. This method will catch fish. However, it does not compare in results to flipping your spinner upstream.

A spinner tumbling and flashing downstream imitates an

unhealthy forage fish. Unhealthy or less active food is much easier for a trout to intercept and ingest than is a vigorous shiner or sculpin that often escapes, by zigging when the predator is zagging.

With disabled prey, the trout simply coasts over into the feeding zone and inhales the meal. In other words, a trout doesn't have to work as hard to strike a spinner you are retrieving with the flow.

Spinner reels with high retrieve ratios (four or five turns of the spool to one turn of the handle) work best for this type of angling.

Most dry fly fishermen wouldn't think of any other approach, and a lot of bait fishermen realize the advantages of an upstream delivery. But it is seldom that you spot a hardware man tossing his lures in that direction.

The simple notion that the angler is behind the trout and out of the fish's line of vision is the first advantage to fishing spinners upstream. In addition, positioned in this manner, the angler erases the possibility of stirring silt or other bottom material that will drift to the fish and alert them.

In rivers where the fishing pressure is greater than average, the trout that hang around for a while have ample opportunities to see hundreds of spinners streak by. The sheer variety of a spinner (read that *baitfish* for a trout's way of thinking) heading in the other direction, the direction in which food usually approaches, works in your favor.

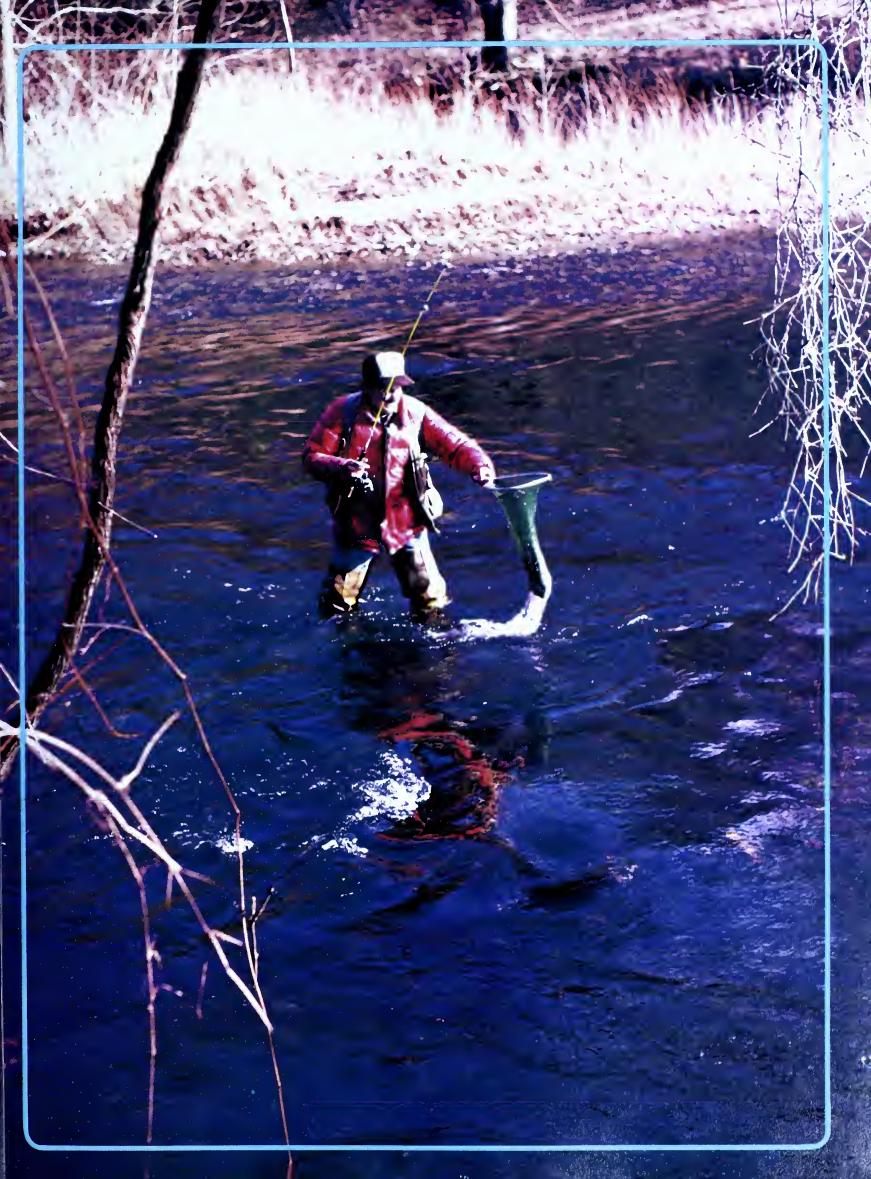
Fly rod spinning

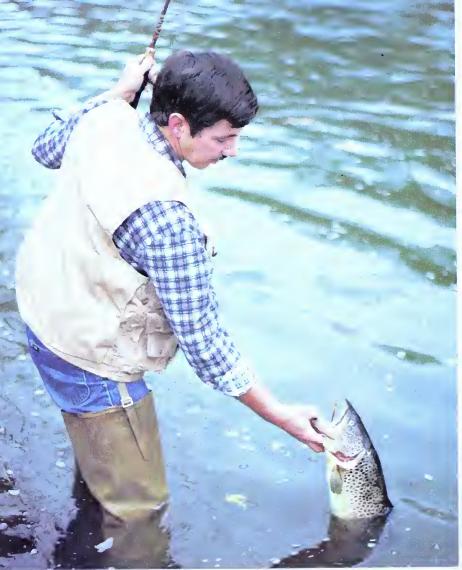
When I was wetting my first hooks, spinning reels were still relatively new creations. Thus, I got the opportunity to watch some masters of the fly rod spinner at work.

Many of these oldtimers would not give in to the modern technology of the open face spinning reel, and with the expertise they had gathered from years of waving the fly rod, they really had no need to.

Obviously, spinners used with a fly rod must be lightweight. Heavy duty hardware would be too unwieldy for the fly rod man to maneuver.

Fly rod spinning is usually a small-stream, close-to-thevest activity in which as little line as possible exists between the lure and the tip of the rod.





The method has its best success on small streams with heavy cover. Long rods (minimum of eight feet) are poked through the cover where the spinner is either roll cast or flipped into a run. With no splitshot on the line, it is possible to stand there until your arm gets tired as the lightweight spinner wiggles and flashes. Usually a trout will strike immediately, but at other times the fish will eyeball the lure for many minutes before it attacks.

Swivel or not

Sometimes the best thing you can do for yourself is to put a swivel between your line and the spinner. Sometimes the worst thing you can do for yourself is to put a swivel between your line and the spinner.

A rule of thumb is this: If the swivel interferes with the motion or free play of the lure, forget it. Swivels usually interfere with the action of very lightweight spinners that have to be lifted and directed over and around rocks and other submerged cover.

Swivels can also get in the way of the action when you are trying to fish a spinner very slowly.

It's your choice, but I have decided that it is sometimes better to put up with a little line twist than to make the spinner look and act like the metal contraption it really is.

When using a heavier spinner, you will find that the swivel is not a hindrance. These spinners require a relatively strong retrieve to keep the blade revolving and the swivel will not interfere as much.

Riffles or pools

Are spinners better fish-catchers in riffles or pools? Let's put it this way, there is no bad place to fish with a spinner, and as any biologist will tell you, trout love a stream that

has a good blend of both types of habitat. So do spinner fishermen.

In spite of the fact that rainbows, browns, and brookies will strike a spinner in both fast and slow water, there is a difference.

The difference is simple. In a riffle or fast water, the trout has very little time to make up its mind whether or not to strike. In a pool or slow water, the trout has plenty of time to inspect the offering and decide if it's worth a bite.

When fishing in riffles, try to make the spinner pause as long as possible in the mini-pockets that exist behind a rock or clump of debris. Trout are physically fit and very acrobatic, but even a finely tuned swimming machine such as a rainbow trout can miss a lure that it sees for only a second or two.

When fishing pools, try both fast and slow retrieves. There are days when only the slow, deep retrieve will score with the trout, and there are days when the fish want only fast and snappy spinners. However, it has been my experience that there are more days when the slowly maneuvered hardware is what the trout prefer.

The no-retrieve retrieve

You'll need a lightweight spinner for this one. The Hildebrandt size 0, 1, or 2 gold-plated spinner is ideal. To the spinner shaft attach a straight-eyed wet fly or a straight-eyed bait hook. You can impale a small garden worm, but it isn't necessary. The flash of the spinner is enough to attract the trout.

Find some fast-moving water. An ideal location would be an extremely rapid riffle that shoots into a pool.

Place enough splitshot 18 inches up the line from the spinner so that the shot sinks on a tight line. Then position the spinner so that it is hanging and fluttering in the spot where the riffle meets the pool.

Your positioning has to be perfect. If you allow the spinner to go too far downstream into the pool, the current will be too slow and the hardware will sink. If you pull the spinner too far upstream into the riffle, the trout will not leave the pool to chase it.

If you find that ideal spot, the sinker will rest on the bottom, the spinner will sparkle in the current, and the trout will come to the top of the pool to have at it. At that time, your main job will be to hang on.

Bigger trout

One of the advantages to using spinners for trout is that bigger trout eat more fish than anything else. And because your spinner is imitating a little fish, you are a prime candidate to latch onto a big trout.

If you are fishing in a stream that you are sure contains some big trout, you won't go wrong by flipping spinners.

Each kind of trout angling has its own thrill. The bait angler loves that tap, tap, tap of a trout making contact with a nightcrawler attached to his hook. The fly fisherman dreams of a dragless float and dimpling trout. And the spinner fisherman? He's the guy who loves the armwrenching thud that takes place when his lure is moving in one direction and a trout is traveling in another direction and the two meet.

He's also the guy who has found out that there is more than one way to make that happen.

Trout Stocking in 1986

to the 1986 stocking list, and some waters already listed have been extended. Here is an overview of the changes to the Commission trout stocking program.

New waters

Bermudian Creek, Adams County. A 6.7-mile section from the Route 94 bridge upstream to the first LR 01004 bridge will be added for the 1986 program. This section is an excellent candidate in northern Adams County where until now only Latimore Creek in the York Springs area is stocked with trout. A preseason and one inseason stocking will be scheduled.

Middletown Reservoir, Dauphin County. Trout fishing opportunities are limited in this area of southern Dauphin County. Middletown Reservoir will receive a preseason and one inseason stocking.

Extensions

Bull Creek, Allegheny County. A 1.8-mile stretch from the present lower stocking limit at Grims Bridge (near Little Bull Creek) downstream to the mouth will be added in 1986. This new area includes the section of Bull Creek relocated during the construction of Route 28. For 1986, a 7.4-mile total section of Bull Creek will be stocked preseason and inseason.

Bull Run, Perry County. Bull Run will be extended from the present lower stocking limit at LR 50001 bridge at Manassa Church downstream 1.8 miles to its mouth. Bull Run enters Sherman Creek within a trout-stocked section of that stream. Thirteen private land-



owners have been contacted by WCO Leamer and are willing to permit public angling.

Little Paint Creek, Cambria County. This addition is an extension of the lower stocking limit downstream 1.0 mile to include property owned by the University of Pittsburgh. Although not a major addition, this stretch is easily accessible to public use and is publicly owned, and is in an area of Pennsylvania with few unpolluted waters.

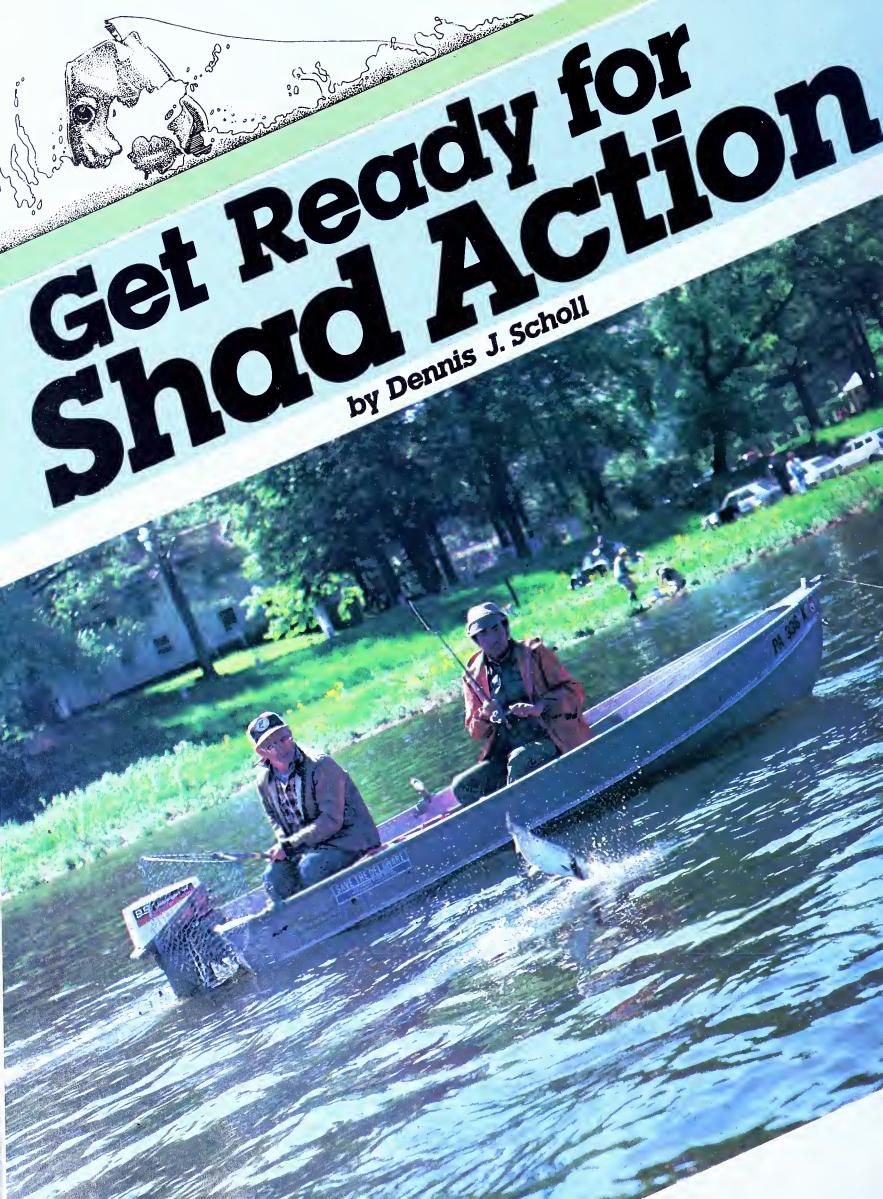
North Branch Mahantango Creek, Snyder County. Stream size became very small as the upper section limit for stocking was approached. A 1985 survey has enabled deletion of this narrow portion in exchange for a downstream extension. The stocked section has essentially "moved" downstream and adds 1.6 miles of stockable water to that stocked in 1985. The North Branch will receive trout in 1986 over a 5.9-mile section.

Marsh Creek, Adams County. Trout stream fisheries are limited in Adams County. WCO Singer has contacted landowners and received their support for an upstream extension on Marsh Creek. For 1986, 5.7 miles of Marsh Creek will be stocked.

Mill Creek, Jefferson County. When inventoried in 1978, the lowermost 1.4 miles of Mill Creek were degraded by acid mine drainage. A steady improvement in water quality prompted a reexamination in 1985. This extension will receive much angler attention. Physical habitat and access are quite good.

South Branch French Creek, Erie County. Near Erie and flowing through Union City and Corry, the South Branch receives a great deal of angler use. In 1985, a 6.7-mile section from LR 25046 at the Corry City limits downstream to Beaver Run was stocked preseason and inseason with 4,000 trout. The Caldwell Creek Chapter of Trout Unlimited has been active in contacting landowners with assistance and coordination from WCO Carter and Area Fisheries Manager Lee. Fence stiles are being constructed and placed by the chapter where anglers must cross fenced pasture. The chapter has committed itself to act as a liaison between landowners and anglers. Due to these efforts, the lower section/stocking limit will be extended downstream to the mouth. In 1986, the South Branch will receive trout for a stream length of 18.7 miles.

Quittapahilla Creek, Lebanon County. This stream is one of the longest and widest in Lebanon County. It was approved in 1985 for catachable trout after years of degraded water quality. A large portion of the 1985 section has been posted against public ingress by Bethlehem Steel. For 1986, revised section limits will eliminate the posted area and permit more intensive stocking. In 1986, the revised section is from the Clear Spring Road bridge downstream to the mouth, a distance of 5.9 miles. This figure is actually a reduction from the 1985 length of 7.1 miles, but elimination of the posted property greatly increases the trout allocation.



hen I was a kid, I dreamed of fishing for salmon and steelhead on raucous West Coast rivers. In my mind, ocean-run salmonids were the kings of the fish world.

My childhood days have long since passed, and with them have gone my dreams of faraway rivers and monstrous fish. But my yearning to catch anadromous species is still with me, and fortunately, I have an outlet for my desires literally in my own backyard—the Delaware River, where hundreds of thousands of American shad spawn each spring.

For sheer strength, shad can't be topped. They're robust 3-pound to 11-pound fish that are full of energy after spending 3 to 5 years in the food-rich Atlantic Ocean. Shad are aerial acrobats, drag-testing divers, and tireless bulldogs all rolled into one. If there's a fish in the Commonwealth that can match the shad, pound for pound, it's a very well-kept secret. The shad is as fine a fighter as you'll run across anywhere.

By the first week of April, anglers will be catching the first of the Delaware's migratory shad, and considering that's just about now, it's time to prepare your gear. If you'll be entering your rookie season of shad fishing, there's even less time to become acquainted with the equipment you should own.

There are items that are basic for all shad fishermen, but gear needs to vary because anglers have the choice of fishing from the Delaware's shoreline or from a boat.

Whatever method you choose, you should be properly equipped. If "shad fever" has hit you, cure it by being prepared when the fish are biting. Here's a look at the remedies you'll need.

Rods

A factory-built, "\$9.98 special" that bends like a willow branch from butt to tip is good enough to catch shad. But to enjoy the sport best and increase your chances of catching more fish, invest a few extra dollars in a rod that's designed for the species you're after.

Shad are excellent fighters, but they must be handled delicately or they'll gain their freedom. The side portions of a shad's mouth are soft and nearly transparent, and they're easily torn by the hook of a shad dart or other lure. An angler must demonstrate a light touch when a fish is hooked, and allow the shad to use the entire river to stage its fight.

The right rod helps you maintain the upper hand, even when the fish is scorching your drag. There are some fine production spinning rods on today's market; Eagle Claw, Fenwick, Berkley, and Orvis are a few. But the best shad rods are custom-built. There are many more rod blanks available to the custom rod builder than there are to the consumer of department store equipment. If you know a rod builder, inquire about a good shad rod, or better yet, build your own. By doing that, you'll have a much better understanding of the rod's dynamics.

The best all-around shad rod is one of medium-fast or medium-light action that has "beef" in the butt section and a tip that "gives" when the shad makes a hard run, but also allows you to control the action whenever appropriate. Graphite affords this quality more than fiberglass or S-glass, but there are glass rods that work well, too, although they're usually the more expensive models.

Keep in mind that you don't want a soft-action "buggy whip" or a stiff "meat rod." "Soft" rods won't meet your casting expectations and superfast rods won't provide the amount of sensitivity you need during a hookup. Look for, or build, a happy compromise.

As far as length is concerned, shore fishermen should select a rod in the 6 ½-foot to 7-foot range. Coupled with the proper line and lure, a rod of that length helps you cast to any shad within 150-175 feet of the shoreline, particularly if the rod is composed of graphite.

If you're a boat fishermen, you have the luxury of anchoring over the river's channel, where shad travel, and because casting is not your main concern, you have more freedom when choosing a rod. You can select ultralight rods, rods of 6½ or 7 feet, or even fly rods. Just be sure it's of the proper action. Fighting a fish from a boat is generally a more hair-raising experience than it is from the shoreline, and you must be capable of controlling a fish when it decides to

make a run into heavy water.

If you're looking for something unusual, check into a "noodle rod," a 10-foot to 12-foot ultralight stick that's becoming more popular along the Delaware. Noodle rods are designed to be fished from shore with 2-pound and 4-pound lines. They're capable of casting 1/4-ounce lures surprising distances, much farther than the average spinning rod.

But because of their length and small diameter, you won't find a fastaction noodle rod. It's a slower-action rod that eventually wears out the fish.

Fly fishermen should choose rods of 8 to 9 feet that are matched for 7-, 8-, or 9-weight lines. You'll be required to cast considerable distances in many instances, so you'll need a rod with backbone that can "punch" your fly to the fish.

As far as guides are concerned, choose those made of aluminum oxide, silicon carbon (SIC), or hardloy. They're light, afford superior "castability," lessen the chances of line friction and abrasion, and won't wear out under normal use.

Although there's nothing wrong with using small conventional reels, the spinning reel is the most popular with shad fishermen. They have the best casting capabilities of any reel and provide better matchups with the types of rods that are best suited for the sport.

There are many good reels on today's market, but only the models that are respected for their superior drag systems should be used. Shad can strip surprising amounts of line in a matter of seconds, and you need a drag that isn't going to freeze.

Choose the best reel you can afford, and make sure it's one that will hold 200 or more yards of 4-pound or 6-pound line.

I own a Penn 714, two Garcia-Mitchell 410s, a Cardinal 4, and a Lew Childre Speed Spool, model one. They're all good reels, but the Speed Spool is a particularly fine example of craftsmanship. The rear drag is as smooth as silk, and it has withstood many, many long battles.

When you finally settle on a particular model, be sure it is properly matched to your rod in terms of weight, or else you'll be wondering why your casts aren't traveling as far as you'd like.



A good shad fisherman understands the importance of a good drag, and even if you own the best reel money can buy, you're still going to lose shad if the drag isn't properly set. Start on the light side and work from there. Remember, a shad's mouth is soft, so you must be sure the line is going to leave the spool smoothly when the fish runs.

If you're a fly fisherman, your reel should be large enough to hold a full fly line plus 100-150 yards of backing. If you ever hook a hefty shad in heavy rapids, you'll know why you need the extra line.

One final reminder concerning reels: oil and grease them before the shad arrive, and spool them with fresh line after every outing. You'll lose quite a bit of monofilament during the shad season, and it's not a bad idea to have an extra spool tucked away in your tackle box.

Line

Shad are light-sensitive. They travel the river's channel, the deepest and darkest portion of the stream, and they also swim close to the bottom, which means your lure must be down deep or you won't hook any fish.

So when you're looking for the right line for shad fishing, remember this rule of thumb: the lighter the line, the smaller its diameter and the quicker it sinks.

Four and 6-pound are the preferred lines of most veteran shad fishermen. There's no reason to use 8-pound test

unless you don't have confidence in your abilities. If you tie good knots, your line is of good quality—Stren, Trilene, Maxima, Garcia Royal Bonnyl-and you don't "horse" your fish (a "no-no" in this sport), there's no reason why any shad should tear 6pound test. Using 8-pound line decreases your chances of hooking fish.

For the adventurous, try 2-pound mono on a noodle rod or a short ultralight rod and set the drag on the light side. A few fish might break off, but you'll have fun in the process.

Fly lines should be of the extra-fast sinking variety in 7 to 9 weight. Scientific Anglers' Wet Belly Hi-D 20 or Wethead Hi-D 30 are both good choices, especially for deeper runs of water. A Wet Tip 10 line is good for the upper Delaware's shallower rapids and pools.

Lures

The most popular shad fishing lure is the shad dart, a small lead jig with an angled head that rides hook up in the current. Spinners, with or without colored beads, are also good, as are small spoons. Some anglers who know a shad's affinity for gold use nothing more than a single gold hook weighted down with split shot. Others use gold hook and fly combinations.

Shad darts vary in weight from 1/32nd-ounce to 1/4-ounce and even heavier. The 1/4-ounce darts are most popular with shore fishermen because they can be cast greater distances, but

boat fishermen prefer smaller darts of 1/6th to 1/16th of an ounce. The 1/32nd-ounce darts are proven fish catchers, too, but they are used basically during periods of low water or late in the season when spawning shad cruise near the river's surface.

Many opinions have been voiced regarding the best color for darts. But let's set one thing straight: all colors work, although it is true that one color may work better than another in certain situations. That's why a smart shad fisherman carries a variety of colors in his tackle box.

Red-and-white or yellow-and-red, festooned with white or yellow calftails, are the traditional colors seen along the Delaware. But you'll also find fishermen using black, purple, blue, green, or fluorescent darts. Personally, I prefer the fluorescents (greens, yellows, reds, oranges, hot pinks). I haven't used anything else for several years.

Some anglers employ gold and chrome-plate darts and even darts that aren't painted at all, and they catch a lot of fish. Let's be honest; color is a matter dictated by personal preference, or what the lucky angler next to you happens to be using.

A few final words about darts: Don't leave home without at least two dozen, and don't attach them to swivels. Darts won't put much twist into your line, but they will find rocks.

Darts aren't the only lures on which shad vent their aggressions. Hildebrandt's Flicker Spinner and

Shad King, CP Swings, Swiss Swings, and Mepps spinners also work, in blade sizes 0, 1, and 2. But buy gold spinners. Don't forget, shad love gold.

Splitshot

Splitshot is an often-overlooked commodity, but it's one of the most important components a shad fisherman can own. Without them, anglers are often unable to get their darts down to the fish.

-60

I fish mostly from a boat, and in early April when the Delaware's flow is above normal and the shad are hugging the bottom, I often pinch four or five large shot to my line. If the dart becomes hung up, at least I know I'm close to my objective. Then, I simply take off one or more shot until the dart hovers above the bottom at the level of the shad.

As the season progresses and the river's flow decreases, fewer shot are needed. Eventually you'll need only a dart, and finally your lightest dart. To be safe, purchase a variety of sizes of splitshot. Then you'll be ready for all types of water conditions.

Nets

The moment of truth has arrived and you discover your trout net isn't large enough for the 8-pound shad that's less than five feet away. Yes, you should have brought along a wide-mouthed, long-handled net. You need every advantage when a shad is close to shore or boat, and the right net swings the tide in your favor.

Save yourself some exasperating moments; purchase a large, nylon mesh net with a handle that extends 4 to 5 feet. It's an integral part of the game.

Other considerations

Like any stream, the Delaware has its slippery spots. Shore fishermen should heed the rules of safe wading by wearing a pair of hip boots or waders (waders are best in most circumstances) that are bottomed with either felt or cleats. There are many sharp dropoffs in the Delaware, so it's wise to carry a wading staff to "feel" your way about.

Insulated or neoprene waders are good bets in April, but if you can't afford either of those varieties, at least wear a pair of insulated underwear and woolen socks underneath waders of regular construction. Also, if you

can afford an inflatable fishing vest, buy one, or wear a personal flotation



device (PFD). Hypothermia can affect the body very quickly in 50-degree water, should you happen to fall in.

If you're considering trying shad fishing from a boat, a 12-foot semivee is fine if you'll be fishing by yourself, or with a friend. But if you plan to introduce more than one other angler to the sport, consider a 14-foot model. Semivees are best for traveling the Delaware, which contains rapids that could easily swamp a shallow johnboat or even a bass boat.

And choose a boat that requires little draft. When the Delaware becomes low in mid-May, a heavy boat will have trouble dodging the river's sub-surface rocks and traversing rapids that hold fish.

Motors should match the boat. A 6 hp outboard is fine for pushing a 12-foot boat and one person, but the going becomes slower when more people are added or a longer boat is purchased. Then, a 10 hp, or larger, motor is required.

As far as anchors are concerned, select a 12-pound or 15-pound Navy-type anchor and you'll be able to stick your craft in any rapids you'd like. Mushroom anchors have limited anchoring capabilities. Fast water is not their cup of tea. Fifty feet of nylon rope should be plenty to gain anchorage in most locations.

Fish-finding devices are excellent aids in locating a river's channel, but if you don't own one, a less expensive channel-finding tool is a set of Delaware River maps available from the Delaware River Basin Commission, P.O. Box 7360, W. Trenton, NJ 08628. The current price for the 10-map set is \$6.24, including a first-class postage.

One item boaters can't be without, however, is a PFD. There are boating accidents every year involving shad fishermen, and overturning in the Delaware without a PFD could be tragic. Wear one. It could save your life. In addition, always anchor from the bow in moving water.

Finally, don't forget to dress accordingly in the early portion of the season. Last April 9, I made a trip to Lumberville, Bucks County, dressed in a chamois shirt, heavy sweater,

winter jacket, long underwear, woolen socks, insulated boots, a woolen cap and gloves. I may have looked as if I were on an Arctic trek, but I was warm. The air temperature was 33 degrees at 5:30 a.m. and ice clogged my guides until 9 o'clock.

But I was comfortable, and I was able to take advantage of the schools of shad that were passing through the middle of the Lumberville wing dam. Several anglers around me were forced to curtail their outings because they were insufficiently dressed.

But that's just one example to prove that having the right equipment, even if it's just a pair of warm gloves, can often make the difference between catching shad and returning home empty-handed. So get your gear together now. The shad are right around the corner.

Dennis Scholl is a sportswriter for the Globe Times (Bethlehem, PA), and he is president of the Delaware River Shad Fisherman's Association. For information on this conservation organization, contact him at 501 Magnolia Road, Hellertown, PA 18055.

Citation-sized shad

The minimum weight requirement for American shad in the Commission's Angler's Awards program is 7 pounds. In 1985, the Commission processed 44 Senior Angler's Awards for American shad. Anglers landed 37 in April and seven in May.

Of all these awards, 18 were taken on 6-pound-test line, 14 were caught on 8-pound-test line, and two were fooled each on 2-pound-test, 4-pound-test, and 10-pound-test lines. Six award applications had no indication of line strength.

All award-winning anglers used shad darts to catch their fish, except one—that fish was caught on a flicker spinner.

For complete details on the Commission's Angler's Awards program, contact: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. With requests include a business-sized stamped, self-addressed envelope.

County Features

Greene, Washington, and Beaver Counties

Greene County by Les Haas

Situated in extreme southwestern Pennsylvania, Greene County is bordered on the south and west by West Virginia, on the east by the Monongahela River, and on the north by Washington County.

Ronald Duke Lake

Located in Ryerson Station State Park, this waterway offers winter and spring trout fishing as well as fishing for warmwater species in the summer and fall.

After the April opening day, trout fishermen score from the shoreline using the standard trout baits. Boat fishermen use Mepps spinners and small gold or silver spoons and troll for trout.

Trout fishing action drops off after June, and bass, muskies, and catfishing take over. Largemouth bass can be found along the shoreline and near the logs and stumps in the upper end of the lake, provided deep water is nearby.

Dunkard Creek

Dunkard Creek follows the West Virginia border entering Pennsylvania approximately two miles west of Mt. Morris. Approximately six miles of the stream, from Mt. Morris east, hold muskies and smallmouth bass. The lower section of stream, to its confluence with the Monongahela River at Poland Mines, is adversely affected by abandoned mine drainage and holds few, if any, fish.

Interstate 79 south from Waynesburg takes you to Mt. Morris. L.R. 30020 follows the stream east. You may want to consider taking a canoe to fish some of the larger pools where road access is good.

Ten Mile Creek

Ten Mile Creek, formed by the confluence of the north and south forks at Clarksville, flows two miles until it enters the Monongahela River at Millsboro, Washington County.

Ten Mile Creek is a slow-moving stream with its flow affected by barge traffic at Maxwell Lock and Dam on the

Mon. Diverse is the best word to describe fishing opportunities in Ten Mile: Walleye in May, muskies, channel catfish, carp, and sunshine bass—the striper/white bass hybrid, year-round.

Musky fishermen do well using large minnows and lures imitating the creek's abundant gizzard shad. The pool at the "Forks" in Clarksville downstream to Pitt Gas is the best stretch.

Walleye enter the creek from the river and gorge themselves on the abundant minnows. The best fishing occurs after dark and usually continues from the May opening day until early June. The slim minnow-type plugs are best with black back/silver belly the best color. The bend below Clarksville can be waded.

Largemouth bass fishermen enjoy moderate success fishing the shoreline in the vicinity of the many marinas near the mouth of the creek. Spring and fall are the best times. Spinnerbaits are a popular lure choice.

Ten Mile Creek forms the boundary between Washington and Greene counties and can be reached by traveling north or south on Route 88. Boats can be launched for a \$5 yearly fee at Ten Mile County Park, approximately one mile upstream from Route 88.

South Fork Ten Mile Creek

The South Fork of Ten Mile Creek flows through Waynesburg and meets the North Fork at Clarksville. The Fish Commission stocks muskies throughout this stretch of the creek. There are many good pools along and just off Route 188, which follows the stream from Waynesburg to Jefferson.

Channel catfish, carp, and suckers are abundant and account for many pleasant evenings spent near the glow of a lantern. Doughball recipes, nightcrawlers, and chicken liver are popular baits.

The Mon

The Monongahela River receives more fishing pressure than any of Greene County's waters. The year 1986 will show just how seriously the November 1985 flood affected the Mon River fishery. There were reports of gamefish stranded by the receding flood waters.

The Mon is a series of lakes formed by the erection of locks and dams to facilitate commercial river navigation.

Walleye fishing in the Mon is concentrated at the three locks and dams. Shore and boat anglers fish immediately below the dams from early October through winter.

Bass fishing in the Mon has been changing. Smallmouth bass are now the prevalent species, but in the past, the largemouth was the most common species caught. The bass are scattered throughout the river, and if any one place is better than another, it may be at the mouths of the various streams flowing into the river. In the Pt. Marion area, the Cheat River produces good bass fishing. North of Greensboro, Whiteley Creek, Muddy Creek, and Ten Mile Creek enter the river and provide good fishing at their mouths.

Muskies can be found anywhere in the river with most reports of big fish coming from anglers fishing near the locks and dams. Very few fishermen try specifically for muskies, with most catches made by bass fishermen tossing plugs. The weed growth along shore provides ample cover for a lurking musky, and these are good places for the fisherman to begin his search. The three streams mentioned as good bass fishing spots also attract muskies. Large plugs imitating the abundant shad are a good bet.

The white bass/striped bass hybrid, also known as sunshine bass, were just beginning to appear in fishermen's

creels in 1985.

The most popular bank fishing spots are opposite Pt. Marion on the Greene County side, at the mouth of Dunkard Creek near Dilliner, below Lock and Dam 7 at Greensboro, at the Fish Commission access at Rices Landing, and in Millsboro and Fredericktown in Washington County.

Bottom fishermen commonly use chicken liver or nightcrawlers as bait, with some using doughballs, also. A select few knowledgeable anglers swear by fresh groundhog liver as the best bait available for big channel cats.

Boaters have a choice of two Fish Commission access areas along this portion of the Mon. There is an access area in Pt. Marion providing access to the Pt. Marion pool. After crossing the Route 88 bridge into Pt. Marion, turn right at the first street and continue to the access area next to the boro park.

The Fish Commission access area at Rices Landing can be reached by turning onto L.R. 30056 at the intersection of routes 88 and 188 in Dry Tavern. A left turn onto L.R. 30077 takes you to Rices Landing and the access area.

Boat fishermen are reminded that commercial navigation on the river uses the mid-river channel for travel. Also, please respect the buoys placed below and above each lock and dam, and stay away from the dams.

North Fork Wheeling Creek

The North Fork of Wheeling Creek is stocked from the upstream boundary of Ryerson Station State Park to its confluence with the South Fork several miles downstream. Access to the stream is via Route 21 through Wind Ridge and L.R. 30039 along the stream.

Popular fishing spots are immediately above and below Duke Lake in the park and in the area of the Route 21 bridge downstream from the park.

South Fork Wheeling Creek

The South Fork of Wheeling Creek is stocked from its confluence with the North Fork upstream to where L.R. 30001 and L.R. 30002 meet.

Access is via Route 21 after crossing the North Fork and turning left onto L.R. 30001. Areas near the road receive the most pressure, but access is good along the entire length of the stocked section.

The Dunkard Fork of Wheeling Creek is stocked from the confluence of the North and South Fork downstream to where L.R. 30001 and 30118 meet. Access to the stream is gained by following L.R. 30001 off Route 21 after crossing the North and South forks. The stream makes a huge horseshoe turn near the downstream end of the stocked area with walk-in access only. For the fisherman who enjoys solitude and a near day-long fishing opportunity. this is the spot to try. Just watch for the "walk-in only" signs along L.R. 30001.



Enslow Fork Wheeling Creek

The Enslow Fork of Wheeling Creek forms a portion of the boundary between Greene and Washington counties. It is one of the most remote and beautiful valleys in the county. Anglers fishing the Enslow Fork may share the day with the deer, grouse, and turkeys common to the valley.

Anglers using live bait, artificial lures, and flies have ample opportunity to ply their trade among the many pools and riffles of the Enslow Fork. Cheese, worms, salmon eggs, and minnows are used frequently and catch fish right into June. Small gold or silver spinners and what locals call Joe flies, an ultralight spinner-fly, work as well. The fly fisherman is better off using streamer patterns or bright, attractive wet flies to tempt the abundant trout.

Enslow Fork can be reached by taking route 21 west from Waynesburg and turning right onto L.R. 30007 in Graysville. Just before crossing the stream at Ackley Bridge, turn right to the upstream areas or left to fish the downstream reaches.

Washington County

by Keith E. Small

Washington County is nestled in western Pennsylvania between the Monongahela River on its eastern border and the West Virginia panhandle on its western border. The county encompasses 857 square miles and is bisected north to south by Interstate 79 and east to west by Interstate 70.

The fishing is as varied as the terrain and waterways of the county, from the numerous fee lakes, county-owned flood control dams, water company dams, farm ponds, gamelands ponds, and Fish Commission-owned lakes. There are three lakes most used and open to the public.

Cross Creek Lake

The largest is Cross Creek Lake (258 acres, nearly 8 miles of varied shoreline, 21/2 to 3 miles long, and over 60 feet at the deepest spot). The lake is surrounded by over 3,000 acres of county-owned property in western Washington County, forming Cross Creek County Park. The main entrance to the park is located along Route 50 at Rea, 3.5 miles east of Avella. The lake is a new impoundment managed by the Fish Commission as a warmwater fishery.

Walleye, largemouth bass, black crappies, channel catfish, and redear sunfish have been stocked by the Fish Commission. There are also natural populations of green sunfish, bluegills, and bass in the lake.

There is a 10 hp limit on motors. The Fish Commission has established special regulations for bass and panfish as listed in the Summary of Fishing Regulations and Laws.

The lake is accessible by walk-in from various points, but there is only one established parking, picnic, and boat launch in the park (accessible via main entrance at Rea).

The best time to fish this lake is spring, early summer, and fall during the sunrise to mid-morning and late afternoon to evening hours. The baits tend to be standard county-wide for all waters. Live minnows and nightcrawlers for most species; jigs of 1/32-ounce for panfish to 1/8ounce to 1/4-ounce for bass and walleye. Other artificials such as Rapalas and Rebels take both bass and walleve (fishing cover for bass and trolling/drifting more open water for walleye). Spinnerbaits work very well for bass early in the season. Spinning and spin-casting is the most common tackie with 6-pound-test to 12-pound-test line and light-action to medium-action rods.

The variety of structure at Cross Creek Lake and the many inlets provide good fishing at most any point on the lake.

Dutch Fork Lake

Dutch Fork Lake (91 acres) is a Fish Commission-owned waterway limited to electric motors for all watercraft. The best access to the lake is via Interstate 70, exit 2, then 4.5 miles west on U.S. Route 40. Then turn right off Route 40 and follow the signs for the lake. The lake is managed as a bi-level fishery (both warmwater fish and trout). Dutch Fork Lake has an interesting blend of warmwater species including the purebred musky, largemouth bass, channel catfish, and crappies, bluegills, and carp. The waterway was also one of the first lakes in the state to receive the saugeye (walleye-sauger hybrid).

The best fishing times are spring/early summer and fall during the sunrise to mid-morning and late afternoon to

evening hours.

There are trout stocked in the traditional spring and in the trout is much the same as for the warmwater fish. Some anglers have good success with late-night fishing (especially

Ice fishing has produced good results, but the ice conditions have varied year to year. In addition to previously mentioned baits, Velveeta cheese, fireballs, and various spinners work well for the trout.

There are two unpaved parking facilities on the west side of the lake with a boat launch at the larger of the two. There is one unpaved lot with a boat launch on the east side of the lake. Shoreline fishermen have access to the majority of the lake with minimal walking. Structure fishing at most points of the lake provides the best results.

Canonsburg Lake

Canonsburg Lake (75 acres) is another Fish Commissionowned property. All Commission-owned or controlled properties have numerous regulations governing their use, so refer to your summary of regulations and laws for details. Canonsburg Lake is similar to Dutch Fork Lake, except for the warmwater fish. Tiger muskies are stocked instead of purebred muskies, and there are no saugeye.

Canonsburg Lake is located in the northern section of the county just off Route 19 at Donaldsons Crossroads. There are two parking lots on the east side of the lake. The central (main) lot is paved and has a boat launch. Watercraft are limited to electric motors.

There are bait shops in the immediate vicinity of all three lakes.

The Mon

The Monongahela River, flowing north for 42 miles along the eastern border of Washington County, has evolved into a warmwater fishery that any fisherman should enjoy. The river has been stocked with walleye, tiger muskies, channel catfish, and sunshine bass (striped bass/white bass hybrids) during recent years by the Fish Commission. Largemouth bass, white bass, perch, and trout have been stocked by sportsmens clubs along the river, primarily in the California and Fredericktown areas. The Mon has also shown good natural reproduction of smallmouth bass, some sauger, and good populations of catfish. The carp is in abundance, also.

Some of the better fishing spots are at the locks and dams, and where the larger tributary streams enter the Mon. In addition, good structure and cover can be found in much of the river.

Most of the communities along the Mon have some form of access for launching boats. There are two Fish Commission accesses, (one at Speers, off of Route 88 near 1-70 and one at the south end of Monongahela city limits off Route 837).

The list of approved trout waters for Washington County totals 14. They are spread quite thoroughly throughout the county. Ten of these waters are streams and all provide good put-and-take fishing. Most, if not all, leave some holdover trout from year to year.

Aunt Clara Fork in the extreme northwestern corner and Enslow Fork in the extreme southwestern corner of the county provide the least accessible, most natural settings for trout fishing. Route 18 will get you in the general area of both streams, but from there, use a map.

Whiteley Creek

Whiteley Creek is the only approved trout stream in eastern Greene County. Beginning where it flows under I-79, it is stocked downstream to the L.R. 30021 bridge below Garards Fort, a distance of six miles. Much of the stream flows through Game Lands 223.

The upper portions of Whiteley Creek are slow-flowing with brushy banks and difficult access. Between the two covered bridges downstream, several beaver dams further slow the stream. Between the last covered bridge and Garards Fort, the only access is by foot.

The successful trout fishermen uses salmon eggs or worms for bait.

Whiteley Creek can be reached via the Kirby exit on I-79. L.R. 30014 and 616 follow the stream, providing ample access. Several of the game lands parking lots are along the stream.

Beaver County

by Gregory A. Jacobs

Beaver County is divided by the Ohio and Beaver rivers, and you'll find heavy industry along the banks of the rivers, which is typical of southwestern Pennsylvania.

Hereford Manor Lakes

Hereford Manor Lakes is a Fish Commission-owned facility that has two lakes. There is the "Lower Lake," which is 43 acres, and the "Upper Lake" which is 27 acres. The best route to get to this facility is Route 288 West from Zelienople to Lake Road.

The "Lower Lake" is managed as a trout lake and thus is stocked heavily in the spring. The lake also receives trout in the fall and winter for ice fishing. There is a boat ramp on the lake at the main parking lot off Lake Road. There are no facilities for overnight mooring.

There are roads on both sides of the lake to provide easy access for the shore fisherman. There are ample spaces for parking vehicles on both sides of the lake. The most heavily fished area is the dam breast, but excellent fishing exists around the entire lake.

Although the lake is managed as a trout lake, thriving

populations of largemouth bass and panfish cxist. A few walleye roam the waters, but very few walleye are caught in the course of a year. The Fish Commission recently stocked walleye fingerlings, so the walleye picture is looking up. A recent survey by Commission biologists found a flathead catfish in the 40-pound class, and it was very close to the state record for this species.

The trout tend to fall for salmon eggs, mealworms, cheese, and white spinners. The spring is the best time for the trout, but good catches are recorded during the summer and fall. Ice fishermen find that the trout like salmon eggs, mealworms, and minnows. The hot lure for the bass seems to be the rubber worm in dark colors fished as slow as possible.

The "Upper Lake" is unique for this part of the state because it is "walk-in only." There are no roads open to the public to drive to this lake. To get to the "Upper Lake," travel on either of the roads that parallels the "Lower Lake" until you come to a gate. Here you must park your car and walk about 150 yards to the lake.

The lake is long and narrow with footpaths providing the access for the shore fisherman. The lake is surrounded by woodlands and has many small coves. The banks drop off sharply in many places, so in some spots, just getting to the water is a challenge.

The fisherman who wants to use a boat on this lake should think "light." Most fishermen use a canoe or a lightweight john boat. There is no boat access ramp, but the left side of the dam breast is sloped enough to launch small boats.

This lake is also managed for trout, and receives stockings of brown and rainbow trout in the spring and fall. The lake also has a population of panfish and largemouth bass, and a few tiger muskellunge. There are very few caught each year, but when one is caught it was usually worth the effort. The Commission also stocked walleye fingerlings here, so in a couple of years the fishing for walleye should be good.

The trout and bass in the Upper Lake fall for the same lures and bait that are used in the Lower Lake. Spring is the best time, but catches don't fall off very much in the summer and fall. Ice fishermen find that salmon eggs and mealworms produce best for them.

Bradys Run Lake

Bradys Run Lake is a county-owned lake that is located in Bradys Run Park off Route 51 north of Beaver. This is a 41-acre waterway that is managed as a trout lake.

The lake is at present drawn down for dredging that is being done now and should be completed late this summer. Although there won't be any fishing there this year, the lake will be improved for fishermen when it reopens.

Raccoon Lake

Raccoon Lake is a state park waterway located in Raccoon State Park in the southern part of the county. It is located off U.S. 30 near Clinton. The lake is 101 acres, making it the largest public fishing lake in the county.

This lake is managed as a trout lake by the Fish Commission. It receives a good stocking of brown and rainbow trout in the spring.

There is a boat ramp located in a cove about halfway up the lake from the dam breast. If your boat is not registered



The best trout fishing bets in Greene County are Ryerson Station Lake, Dunkard Fork of Wheeling Creek, and Whiteley Creek. In Washington County, try Canonsburg Lake, Little Chartiers Creek, Dutch Fork Lake, Enslow Fork of Wheeling Creek, and Pike Run. In Beaver County, try Brady Run Lake, Hereford Manor Lakes, North Fork of the Little Beaver River, and Raccoon Lake.

with the state, you must get a launch permit from the park office before launching. You can use electric motors only on this lake. There is a boat rental operating during the late spring and summer months.

The shore fisherman is limited to basically one side of the lake. The one side of the lake doesn't have a road open to public travel. The side of the lake that the road follows has easy access for the shore fisherman.

Besides being stocked with trout, the lake has decent largemouth bass fishing and was recently stocked with walleye and channel catfish fingerlings.

The spring has been the best time for fishing, but with the normal pool, this may change. The best lures and baits are salmon eggs, maggots, cheese, and nightcrawlers, all with about equal success. This lake has not been fished heavily in recent years because of the drawdown, but this spring it will be a normal pool lake.

Traverse Creek

Traverse Creek is also located in Raccoon State Park and flows into and out of Raccoon Lake. It is stocked above and below the lake with most of the stocked fish going above the lake. The Fish Commission stocks about 4 miles of Traverse Creek with rainbow and brown trout. The most heavily fished section is the section near the park office on Route 18. Access to the stream is very good with a park road beside it except for a small section above the lake. The stream is not very wide and contains many nice pools its entire length.

Spring provides the best fishing, but diehard fishermen do quite well during the summer months. The best baits are salmon eggs, mealworms, and small spinners.

South Branch Bradys Run

The South Branch of Bradys Run is located in Bradys Run County Park. It flows into and out of Bradys Run Lake. It is stocked with brown and rainbow trout from the Ice Arcna near the park entrance on Route 51 to the lake, and from the lake upstream to a small bridge located on a township road upstream from the park. The section of the stream immediately upstream from the lake contains three small dams that create large pools that are very popular with local anglers. The stream is narrow and rises very rapidly with small amounts of rain.

Access to the stream is very good with a park road or township road running parallel to it for its entire length.

North Fork Little Beaver River

The North Fork of the Little Beaver River is the longest and largest stream that is stocked with trout in the county. The Little Beaver is stocked from the borough of Darlington upstream into Lawrence County. The total stocked area of the Little Beaver between Beaver and Lawrence counties is about 14 miles. To get to the starting point, take Route 51 to Route 168 into Darlington. The Little Beaver doesn't have any one road beside it, but many small township roads parallel it, and for one section PA 351 travels close to it.

The Little Beaver flows mainly through farmland and makes a good many turns in its travels. The stream is fairly wide at points and in the early spring tends to be cloudy. The stream is stocked with browns and rainbows, and the

brownies are eaught all summer long in the deep holes.

Mill creek

Mill Creek is a small ereek that enters the Ohio River near Georgetown. The stream is stoeked with brown and rainbow trout from Hookstown to the river. To get to Mill Creek, take U.S. 30 and Route 168 to Hookstown, then take the Hookstown-Georgetown Road. This road travels beside the stream except for a small section near the mouth of the stream.

Mill Creek flows down a steep valley, passing by small homes, and in one section you would think you were fishing a small mountain stream far from Beaver County. The ereek is small and narrow and erosses under the road several times. The waterway runs eold and elear in the spring, but in the summer the water levels slow to a trickle.

Spring is the best time to fish Mill Creek because of the low water that oeeurs in the summer. The best baits are salmon eggs and mealworms.

North Fork Big Sewickley Creek

The North Fork of Big Sewiekley Creek is another small stream that winds down a valley. It is located near the Allegheny County line near Leetsdale. To get to the North Fork, take the "Red Belt" of PA 19 south of Warrendale to Hoenig Road, which travels the length of the North Fork. The stream is stocked from where it enters Big Sewiekley Creek upstream for 2 miles.

The ereek bends from one side of the valley to the other and has many small holes that provide eover for the trout. The water levels drop in the summer, so spring is the best time to fish the North Fork.

Ohio River

The Ohio River flows 24 miles through Beaver County, from the Allegheny-Beaver eounty line to the Pennsylvania-Ohio state line. It is the most underfished body of water in southwestern Pennsylvania. The river has been eleaned up and the fish have returned in large numbers.

The walleye, sauger, spotted bass, and muskies have eome back and have provided excellent fishing both from shore and boats.

The Ohio flows beside two major roads in Beaver County, Route 65 and Route 68. Aeeess for shore fishermen is limited by heavy industry on both sides of the river, but aeeess does exist. Aeeess ean be had along Route 68 for most of the distance the Ohio travels beside it.

Boat fishermen have an advantage in fishing the Ohio by being able to fish more of the river without worrying about getting to the river. The boat fisherman has two public ramps. One is at Roehester in Beaver County and the other is just across the county line in Leetsdale. These accesses are both maintained by the Fish Commission.

There is one lock and dam in Beaver County located near the borough of Industry, and boaters should use eare in fishing near the dam and obey the buoys placed there.

The hotspots on the river are below the Montgomery Loek and Dam near Industry. To get there, take Route 68 West from Beaver. Large numbers of walleye, sauger, and spotted bass are eaught here in the spring, summer, and fall with spring the best time.

Beaver River

The Beaver River, like the Ohio, has eome back. The river has good numbers of walleye, sauger, and spotted bass just waiting to be eaught.

The Beaver River enters the Ohio River near Beaver after flowing past New Brighton and Beaver Falls. Access to the Beaver River from New Brighton is fairly good, but from New Brighton up river, access is harder to find. Route 65 parallels the river to New Brighton, and then Route 18 keeps you fairly close. The first of three old dams is at New Brighton, and above this first dam fishing is very limited, due mainly to access to the river.

The boat fisherman has a Fish Commission ramp located at New Brighton and that is the only public boat ramp on the river. Several marinas offer summer dockage.

The old dam at New Brighton is probably the hardest fished spot on the lower river with good eatenes of walleye, sauger, and ehannel eatfish. The mouth of Bradys Run regularly produces walleye and spotted bass. A riverside park in Bridgewater draws anglers with its easy access and fair angler success. The Beaver River, like the Ohio River, has fish in its entire length, so if it looks "fishy," give it a try.

It's about 3 miles from the mouth to the first dam, and beeause of the aecess problems, this is the most fished section. The best time is spring with summer not far behind. The bait that seems to bring the most success is the nighterawler on a Lindy rig. Jigs also take a share of the fish.

Connoquenessing Creek

Connoquenessing Creek enters Beaver County at Route 588 near Zelienople and leaves at Route 65 near Ellwood City. The waters in between offer some of the best smallmouth bass fishing in the area.

There is no major road that travels near the Connie for any distance at all. A map of the area or a stop locally for directions will help you find the ereek.

You will have no problem with aeeess to the stream, onee you're able to find the little township roads that travel beside it. In the spring the Connie runs high and fairly fast, but in the summer when the water levels drop, many anglers wade the stream.

There is no launeh ramp on this section of the ereek, but many anglers float fish the Connie in eanoes. They put in at the bridge on Route 288 in Zelienople and take out at the Route 65 bridge near Ellwood City.

The Connie is by far the best smallmouth fishing in the area. There aren't many big bronzebaeks there, but it has plenty of legal-sized fish. The Fish Commission has stocked tiger muskies and channel eatfish in recent years, and every year a few nice muskies are eaught.

Spring brings a fair sueker run up the ereek, and the number of anglers trying for this fine fish grows every year. The most used baits for smallmouth are minnows and small Rapalas. The suekers in the spring fall best for garden haekle.

Les Haas is the waterways conservation officer in Greene County. Keith E. Small is the waterways conservation officer in Washington County, and Gregory A. Jacobs is the waterways conservation officer in Beaver County.

Commission WCOs are in the forefront of the newest changes and advancements in conservation law enforcement.

The "New" Waterways Conservation Officer



Law Enforcement Division Deputy Chief Perry Heath uses a water testing kit that helps conservation officers detect pollution.

by Bill Porter

steely glint in the eye, a nononsense attitude, a "pinch pad," a pen that worked, a badge, a five-cell flashlight for light and for seeing miscreants, and the old-time fish warden was ready for business.

Things have changed, and now Fish Commission field officers are properly uniformed, and have issued patrol vehicles to match the terrain of their districts and a host of sophisticated equipment plus formal training in its use. There have been a lot of adjustments in the Law Enforcement Division in the last 20 years.

"Old-timers"

The fish warden was pretty much on his own for equipment and training. The first formal officers class graduated from the H. R. Stackhouse Training Center in Bellefonte in 1964. The school was well-funded and provided in-depth training in law enforcement of the existing fishing and boating regulations of the period.

In reverse order, there was little or no money spent for equipment after graduation. Some used state police service revolvers were issued along with outdated-style state police uniforms. A badge and a fish and boat law book completed the regulation issued gear.

This left the fish warden with the responsibility of providing his own transportation, office equipment in some part of his home, suitable outwear clothing, and whatever else seemed necessary in the performance of his job. Some expenses were paid for the officers in lieu of more complete issued equipment.

So the fish warden served faithfully and well—in some cases—with grim determination.

Waterways patrolmen

But the efforts of the faithful were not enough to combat increasing and newer patterns of violations. More responsibility developed with the growing interest in boating. Environmental health and pollution issues became part of the field officer's concerns, as did a more active role in public relations projects. The day of the fish warden came to an end, to be replaced by the waterways patrolman.

As waterways patrolmen, the officers

were now fully uniformed and were issued state patrol vehicles. Formal training advanced from the legal issues into the use of firearms, self-defense, update on conservation and criminal law, and courtroom techniques. The steely glint in the eye was still retained by many officers if somewhat masked by aviator-style "shades"—both practical for the eyes and for formalizing the officer's appearance to the public. The glasses were not an issue item, but they were acceptable in the uniform code.

The waterways patrolman now faced a greater variety of duties, particularly with environmental issues. To match this developing area of concern, additional formal training in sophisticated conservation issues and related law enforcement was necessary. Appropriate training was plugged into the curriculum of new officer classes, and working officers received in-house training to match.

The role of the Fish Commission field officer had doubled to combine many of the functions of state and municipal police with that of the fishing and boating regulations plus the relatively new conservation law enforcement procedures. It became apparent that conservation officers needed different "tools" and management procedures to handle the added and new work experiences.

Waterways conservation officers

So in the recent past, waterways patrolmen took their place in history with the fish warden to emerge in the present as waterways conservation officers. The steely glint was not gone but was covered in part by a new sophistication on the part of the individual officer as his new training, equipment, and responsibilities nurtured and required.

The waterways conservation officer became a biologist, a chemist, a boatswain, a teacher, an administrator of his deputy corps, a public relations person. and of course, a law enforcement officer of a host of codes and regulations. As a result, many field officers were sent to a variety of special schools for theory and "hands-on" experience with new equipment. Training covered advanced water quality testing and analysis, Coast Guard boating, law enforcement specialization courses at the State Police Academy in Hershey, federal fish and wildlife schools on endangered species and other topics, and FBI training in

handling evidence and other advanced investigative procedures.

Advanced equipment

As environmental conditions changed, boating increased, pollution from many sources worsened, and more and more people took to the streams and lakes, it became apparent that changes and adjustments were needed to update the Commission's obligation to the Commonwealth's citizens and to the water resources they used.

A step in that direction was taken in 1980 when the Fish and Boat Law was codified by legislative action. In 1984 the name change of field officers to waterways conservation officers took place, and the legislative adjustments gave these enforcement officers police powers to apprehend for violations of the Pennsylvania Criminal Code.

Communication networks

Recognizing quality communications as a must for effective law enforcement, Ed Manhart, chief of the Commission Law Enforcement Division, implemented a program to secure the needed hardware and train the field officers in modern communication electronics. The results of his effort and others in the Commission have produced a radio/telephone package second to no other conservation agency in the country.

Patrol vehicles now contain a mix of radios and telephones that range from CB through FM and telephone circuits. A series of signal towers, constructed throughout the state, permits instant radio or telephone transmission to other Commission field officers, Game Commission units, state police, county emergency centers, and other related agencies. Monitoring and scanning devices are part of the vehicle and base station units, offering additional capability to the network. National hookups are possible with the existing equipment, if needed.

Field radios are no longer the walkietalkies of limited range and function. The new hand-carried portable units work effectively in vehicles, aboard patrol craft, and on land. In addition to their use as a radio, the device also has a touch-tone telephone built into the base, giving the officer close contact with other officers, his base station, and ultimately a tie with any network or agency needed.

Pollution detection gear

With the increase of pollution from a great variety of sources, a major concern of the modern field officer is to detect, prevent, and collect evidence of pollution problems. To this end, additional technical training has been added to the officer's continuing on-the-job education.

With the training has also come familiarization with the "tools" of pollution detection and analysis. In this instance, field officers have been issued conductivity meters, advanced watertesting field kits, special fine-meshed seines, bottom-sampling gear, and a variety of electronic devices for the detection of pollution. Appropriate training matches the issuing of the new equipment.

"The degradation of fresh water in the Commonwealth has created the need for our field officers to be wellfounded in the biological and chemical processes for checking the presence of heavy metals and other toxic substances in our water, not familiar to the officers in the earlier years of their careers," said Perry Heath, deputy chief of the Law Enforcement Division. "The officers are now competent in this area of concern," Heath added.

Visual contact, recording equipment

The steely glint of the field officer's eye has been enhanced and strengthened by a variety of optical devices. Basic to these is the zoom binoculars for general observation and distance viewing. For more refined sightings and longer distances, ultra high-power spotting scopes are included in the officer's equipment. The scopes may be hand-held, used from a tripod, or placed on a vehicle mount that fastens on the window frame, allowing the officer to use the scope from inside the patrol car for long periods of steady sighting.

Many violations and much patrol work occur at night, so the field officers are equipped accordingly. There are night vision goggles, called cyclops, worn over the eyes, not hand-held, for close observation. There is also the hand-held electronic device for night viewing. An enforcement-quality flashlight, issued to each officer, completes the night use gear.

From the standpoint of recording the observations beyond radio/phone reports and written documents later, each field officer is issued a state-of-the-art 35mm camera with multi-lens capability.

In addition, each officer has access to a video tape camera for a variety of

can be reviewed for work practice improvement, to show progress of conservation programs, and to record violations in progress, and so on. In a related area, the conservation officers have been trained in the use of ultraviolet dyes, ultraviolet sensory devices, and related equipment. Primary use is in the marking of evidence and in covert operations in which items need to be identified after the fact of the illegal activity's conclusion or during it. Support enforcement equipment

purposes and uses in field work. Films

Three more categories of equipment complete what the "well-dressed" waterways conservation officer is "wearing" currently.

With the 1985 legislative action, operating a vessel under the influence of alcohol or drugs has become a misdemeanor, with the waterways conservation officers having the responsibility to apprehend and prosecute. As a result, these officers have been trained in the use of breathalizer units, prearrest breath testing devices, and horizontal gaze nystagmic techniques.

Basic armament and restraints have always been a part of the field officer's personal gear, too.

Finally, all officers are trained in advanced first aid and CPR. Appropriate first aid kits are carried in the patrol vehicles and patrol vessels at all

Patrol vessels also carry extra PFDs. towing harnesses for disabled vessels, throw bags, ring buoys, and other lifesaving devices.

From the steely glint, the no-nonsense attitude, personal dedication, and Spartan outlay of the fish warden to the advanced technological gear of the current waterways conservation officer, there seem to be many changes and advancements.

One thing that hasn't changed is the quality of the officer behind the badge. There is still the dedication of purpose, the willingness to accept risk, and the genuine pleasure in the outdoors and working with people who appreciate it. Only the gadgets have changed.



Visual aides: (clockwise from the top) spotting scope, night viewing device ("cyclops"), hand-held night-viewing device, and zoom binoculars.

Bill Porter is a member of the Fish Commission Volunteer I & E Corps. For his advice and assistance in preparing this manuscript, he thanks Perry Heath, deputy chief of the Commission Law Enforcement Division.



Dave Wonderlich

by Dave Rothrock

ost authoritative books on the subject of trout fishing reveal that at least 75 percent of a trout's diet consists of nymphs. For the nymph fisherman. this indicates that the odds for consistent success are definitely in his favor.

Surely there have been times you've arrived at your favorite trout stream to find no available signs of feeding fish. For the dry fly purist, fishing under these conditions may be slow and unproductive. But for those equipped with nymphs and the knowledge of how to use them, there

is always more than just a glimmer of hope.

Unfortunately, there are many who think that nymph fishing is very difficult to learn. There is also a concensus that fishing a nymph is less appealing than fishing a dry fly. Actually, nymph fishing is no more difficult to learn than any other facet of fly fishing. All that's required is investing some time to develop a few basic skills. Once the basic skills are mastered, you'll wonder why you waited so long to indulge.

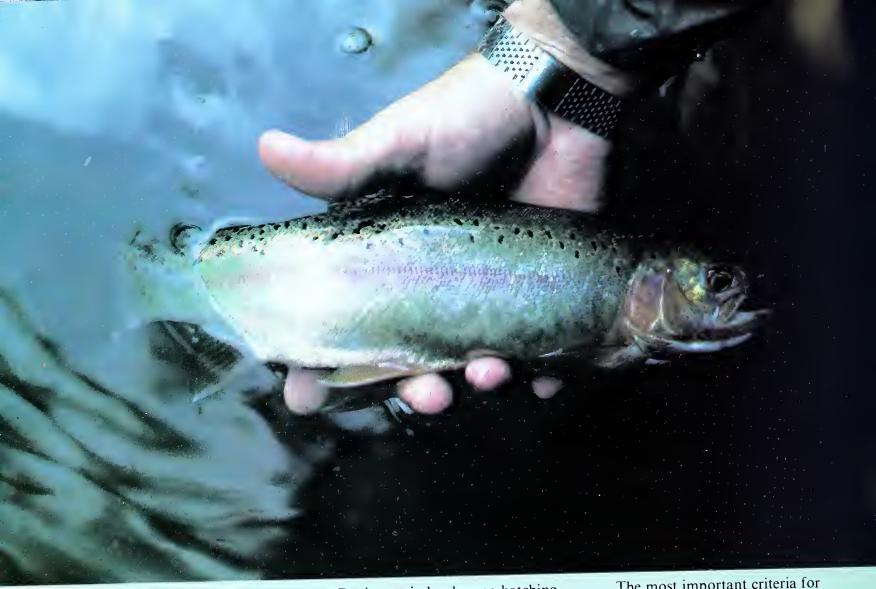
Time of year, stream conditions, and active insect species dictate how to fish your nymph imitation. Early

season usually means fishing roily waters as a result of spring thaws. Late season may find streams very low and crystal-clear. Yet, with three basic techniques, you can meet and successfully fish any conditions you may encounter throughout the entire season.

Upstream, dead-drift

Fishing a nymph upstream, deaddrift is the most widely known technique to most trout anglers. This technique can be used from opening day through the closing of the season.

Because nymphs, depending on the species, spend from one to three years



in the stream fighting for survival among the stream-bottom rocks, silt, and debris, this is where trout spend most of their time searching for a meal. At times, some nymphs are swept up by the stream currents and are easy pickings for the nearby waiting trout.

During periods when no hatching activity is taking place, and during those few hours before a hatch begins, the upstream, dead-drift technique allows you to fish a nymph imitation in a manner and location where trout would most likely expect to find the naturals.

The most important criteria for success using this technique is a natural, drag-free drift. This tactic can best be accomplished by fishing a short line. Of course, you'll have to approach the area of the stream you intend to fish with caution to avoid spooking the resident trout. If possible, try working with no more than 30 feet of line and leader extending beyond the rod tip. I have found that it is very difficult to control a nymph's drift with more than 30 feet of line on the water.

Cast the nymph so that it hits the water before the leader and line. The nymph should enter the water a few feet above the area in which the trout may be lying: this tactic ensures that the nymph has sufficient area of drift to achieve the proper depth. The amount of weight needed to get the nymph on the bottom is dictated by the stream depth and current speed. As the nymph drifts with the current, hold your rod high and keep as much line off the water as possible. By moving your rod at the same speed as the current, you can maintain a taut line between the rod tip and fly. Move the rod too fast or lift too high, though, and you'll pull the nymph from its natural drift.



Unlike fishing a dry fly, you will rarely be able to see the trout take your nymph, so any hesitation in the nymph's drift is a sign to strike. A quick upward jerk of the rod reveals whether or not a trout has inhaled the imitation. The nymph is drifting along the bottom, so there are times the nymph will snag on debris or a rock. This is one way to know if you are achieving the proper depth.

The upstream, dead-drift technique is best suited for fishing riffles, runs, pocket water, and faster currents at the heads of the pools. The faster currents found in these water types allows you to approach more closely the likely looking trout lies, and they will help in imparting subtle action to the nymph.

The emerger

The second technique valuable to the nymph angler is used to imitate the emergent stage of the nymph. Certain species of mayflies and most caddises transform on the stream bottom, swim quickly to the surface, and "pop out" as a freshly hatched adult. When these species are hatching, trout feed readily on this stage, known as the emerger. It is not unusual to find no trout feeding on the surface during these hatches, even though there are many adults on the water.

Generally, the emerger should be cast upstream or quartering up and across. Because the natural begins its journey to the surface from the stream bottom, the imitation should be allowed to go deep in its downstream drift. Many times the trout will be feeding on the naturals just as they begin their ascent, so the strike may occur at the point in the drift where the line swings below you and causes the fly to rise up from the depths. The take can be readily seen with the line jerking forward as the trout grabs the fly and moves away.

If the strike doesn't occur at this point, impart a short jerking motion with the rod tip. This strategy helps imitate the erratic swimming motion of the naturals. If necessary, weight can be added to the leader to help get the fly down to the proper depth. There are times when fishing an emerger in the swift riffles and pocket water using the upstream, dead-drift technique is very effective.

Floating nymphs

The third technique of value is fishing a floating nymph. After the nymph makes its way to the surface, it floats along in the surface film where it splits its shuck and transforms into an adult. I'm sure there have been many of us who have watched trout working on the surface during a good hatch, and yet, even with the finest dry fly imitations, our presentations were refused time after time.

The reason is not that the imitation was faulty; rather, the fish were feeding on the nymphs floating in the surface film.

Fishing a floating nymph is much like fishing a dry fly. To ensure that the nymph floats in the surface film, apply an ointment to the enlarged wing case of the imitation and also to part of the leader near the fly.

Cast your nymph so that it lands about two feet above the working fish and allow it to float downstream drag-free. You probably won't be able to see the nymph itself, so try to follow its drift line and set the hook when a trout surfaces where the nymph should be.

Tackle

Equipment for fishing nymphs is not much different from that used for fishing dry flies. I prefer a rod of about 9 feet in length. This enables me to keep more line off the water and better control the nymph's drift. This is not to say that you can't use a shorter rod and be successful. I learned to fish nymphs with a 61/2-foot rod. The rod should be made to handle a 4-weight, 5-weight, or 6weight line. If you choose a rod for a 4-weight line, it should have a medium action. Rods for 5-weight and 6-weight lines with slow or medium action are ideal for nymph fishing.

Fly lines should be the floating variety in either double-taper or weight-forward. Because your fishing will be mostly on streams from 10 to 40 feet wide, a floating line is best suited for the conditions you'll encounter.

Leaders

The most important part of the nymph angler's equipment is the leader. Using a long leader lets me

keep most of the fly line off the water and reduces the risk of drag. Most of my leaders average 14 to 15 feet long. Most of the time you can't see the nymph, and any hesitation or jerking of the leader is your clue to react.

Until recently, most leaders available commercially were designed for extremely low visibility to the fish. As a byproduct, these leaders are next to invisible to the fisherman, too. Currently, there are available leaders designed specifically for nymph fishing. These are referred to as "high visibility" leaders. The butt sections of these leaders are made from monofilament tinted bright yellow or red and they show up well in the water. I would recommend these leaders, but with some modification.

Most of these leaders come in lengths of 10 feet or less, so 1 suggest purchasing these leaders with a 2X tippet. Cut back the tippet to within 9 inches of the knot joining it to the rest of the leader. Add a 9-inch section of 3X and a 36-inch tippet of 4X. This should give you a leader measuring roughly 12 feet long. To go to a finer tippet, just keep adding 9-inch sections of the next smaller-diameter material below the 2X, and finish with a 36-inch length of the desired tippet.

For those anglers who construct their own leaders, there are different monofilaments available from which to choose. With some experimentation, you'll be able to construct the leader that best suits your needs.

The only remaining items of concern to the nymph angler are the nymph imitations themselves. Nymphs, emergers, and floating nymphs are tied differently because they are used to imitate different stages of the natural insect. If you tie your own flies, you are limited only to your own creativity. If you are one of many who must purchase flies, I suggest you contact a reputable fly fishing specialty shop to supply your needs. Generally, you'll find the imitations available through these shops will more closely resemble the sizes, shapes, and colors they are tied to imitate.

As with any other method of fishing, you won't become an expert nymph angler the first time out on the stream. It will take some time to develop your nymphing skills, but the time will be well-spent.



Conservation Easements

by Michael J. Gathany

et's talk about easements. Most people probably don't know what easements are. Actually, they are quite common. Although there are many types of easements, perhaps the most familiar to the general public is the use of easements by state and local governments for such things as streets, light poles, and sewer systems.

Basically, easements work two ways. First, you as a landowner can either give or sell to another party the right to use a portion of your property for some specific purpose. Second, you can guarantee to another party that you will not do some specific act on all or part of your property. We are concerned with a particular type of easement: The conservation easement.

A conservation easement is an easement granted either to a private or public agency essentially to preserve a particular area in its natural state while allowing public access to it. In particular, the Fish Commission wants to preserve lands and waters for fishing and boating.

Suppose, for instance, that you have always allowed people to fish from a

piece of your land along a stream. You might want to guarantee that future generations of anglers could also enjoy the fishing. You could accomplish this by granting an easement to a public agency such as the Fish Commission. The easement could state that no development would be done along the stream. At the same time, the easement could guarantee that anglers would forever have the right to fish along the same stream. This would preserve the natural beauty of the land and give fishermen perpetual access to it while you remain the landowner.

Title to land

An important idea to remember about easements is that legal title to the land remains with the landowner. Only the control of certain aspects of the land belong to another. To understand how this can be done, it is important to understand the concept of the title to land. The concept was presented well in a pamphlet published by the Pennsylvania Department of Community Affairs, called "Easements for Recreation and Conservation," Technical Assistance Publication Number Six.

Title to land can be viewed as a bundle of sticks — a whole composed of many smaller, separate pieces. In this bundle of sticks, several individual sticks can be removed without changing the external characteristics of the bundle. The same is true of the title to land. Several pieces of this title can be controlled by one party while the actual ownership of the land remains with the original owner. When a person acquires title to land, he usually gets the whole bundle of sticks. A landowner may not even be aware that the individual sticks may be bought or sold separately. However, a landowner may do pretty much as he pleases with his land within certain limits.

Advantages 🐘

Maybe you're saying to yourself that all this sounds good, but what do I get out of it? Why should I give any of my property rights away? There are advantages. The principal advantage is that a conservation easement can assure a landowner that portions of his land along a stream will be enjoyed by future generations of anglers. Also, the guarantee of conserving the natural beauty of an area can raise the aesthetic value of the land as well as the land surrounding it.

Secondly, as mentioned earlier, the title of the land remains with you, the landowner, while its current use continues.

Third, donating a conservation easement can result in tax savings. The value of the easement can be deducted from income or estate taxes. Furthermore, granting an easement may reduce property taxes in some cases. Finally, several property owners working together can conserve the natural beauty and character of large owned area, such as a stream with access to it.

Disadvantages

There are also some disadvantages to conservation easements. The largest disadvantage to granting a conservation easement is that landowners may give up rights to develop the area under easement. While this lowers the development value of the land under easement, it may very well increase the value of adjacent development sites. Where the lands subject to the easement are in the flood plain or underwater, the loss of development rights has little significance.

A second disadvantage results from tax valuation questions. The changes in the value of the land present problems of tax valuation, which may diminish the value of a tax deduction you realize from the gift of your conservation easement. The United States Congress is currently working on changes in the tax laws designed to alleviate valuation problems and encourage donations.

Other questions that might trouble potential donors are: How the landowner knows that his wishes will be fulfilled, whether the government keeps its promise, who is liable for injuries on the property, and what if the land is sold. All these and others are legitimate questions. The answers to these questions can be found in various Pennsylvania laws and in the agreement between the landowner, commonly called the grantor, and the agency receiving the easement, commonly called the grantee.

If you wish to grant an easement and subsequently sell the land, the easement easement stays with the land, and the new owner has to comply with the easement. If someone is injured, there is a Pennsylvania law that limits the liability of anyone you let use your land without charge.

Faced with increasing costs without a matching increase in its budget, the

Fish Commission is scarching for ways to conserve Pennsylvania's water resources for the enjoyment of anglers and boaters. Some public-spirited landowners may welcome the chance to conserve the natural value of their land for future generations.

The donation of conservation easements by private citizens offers an excellent opportunity for conservation and preservation. Private citizens may sometimes enjoy tax savings and be assured that the property under easement will remain in its natural state. At the same time, the Fish Commission can open up or preserve areas for future outdoorsmen at a relatively small expense.

The process is not a simple one. The agreement between grantor and grantee is a detailed, complicated legal document. All offers of conservation easements must be reviewed for suitability and public access. The Fish Commission must also vote to approve all acquisitions of conservation easements.

If you're interested in the program, or if you just want more information, contact John O. Hoffman, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. You should, of course, consult your attorney and tax advisors before going forward with any donation of a conservation easement.



Michael J. Gathany is a third-year student at the Dickinson School of Law and serves as a law clerk in the Office of Chief Counsel of the Pennsylvania Fish Commission.

Other easement programs

The Pennsylvania Fish Commission is not alone in its commitment to conserving Pennsylvania's lands and waters for future generations. The Pennsylvania Game Commission and the Department of Environmental Resources have land acquisition and management programs. Several private, non-profit, organizations make important contributions in this area by acquiring lands or conservation easements. These include organizations like the Western Pennsylvania Conservancy or various local, county, or regional conservancies or land trusts.—Michael J. Gathany

ANGLERS CURRENTS

How to Release Fish

Many factors influence the probability of survival when a fish is returned to the water after it's caught and played. Even though the fish may appear to be in good condition when released, there is no guarantee that it will survive. Still, if you follow these steps closely, you greatly increase the chances for survival of the fish you release.

- Time is important. Play and release the fish as quickly as possible. Don't play the fish until it's completely exhausted.
- Keep your catch in the water as much as possible when removing the hook. A fish suffocates out of water and can sustain brain damage. In addition, if you let a fish flop around on rocks or on the bottom of a boat, you can fatally injure it.
- Be gentle when handling fish. Don't squeeze your catch, and keep your

Angler-Poets

Pennsylvania Angler would like to see Readers send in sublime poetry. The rhyme scheme shouldn't stray From AABBA. We'd like limericks. On this let's

We'd like limericks. On this let's agree.

The subjects of these could be boating,

Your favorite fishing, or dry flies high floating,

Any like topic you write Would surely be all right.

But send no more than three for our voting.

We'll print the best ones, not the worst.

And remember—we can't be coerced Into using limericks late
Of our firm cutoff date.
The deadline is June the first.

Send reader contributions to: The Editor, *Pennsylvania Angler*, P.O. Box 1673, Harrisburg, PA 17105-1673. We can't pay contributors for these poems, but we'll include the name of the contributors with each limerick we publish.

fingers out of its gills. Small-mesh nets are helpful if the mesh doesn't get tangled in the fish's gills.

- Remove the hook gently but as rapidly as possible. Use long-nosed pliers, forceps, or similar tools. If your catch is deeply hooked, cut the line near the fish's mouth and leave the hook in. Don't tear out the hook; the fish could die from shock.
- Revive the fish, then release it after it regains equilibrium. Hold the fish upright, heading upstream. Move the fish forward and backward to force water through the gills. When the fish revives and can swim normally, release it to survive and provide sport on another day.

New Fish Culture Station Established

The Tylersville Fish Culture Station, Clinton County, has been established formally by the Fish Commission as a sub-unit of the Pleasant Gap Fish Culture Station. The Tylersville site was formerly used by the U.S. Fish & Wildlife Service, but now the Commission raises trout there, leasing the hatchery from the federal government.

John Bair is the hatchery superintendent for both the Pleasant Gap and Tylersville facilities, and Kenneth L. Slogaski is the Tylersville hatchery's new foreman. The Tylersville Fish Culture Station will annually produce about 300,000 trout.

STATE-FEDERAL TROUT STOCKING PROGRAM PRESEASON — 1986

TROUT SCHEDULED TO BE STOCKED

PENNSYLVANIA FISH COMMISSION STOCKING PROGRAM:

(State Hatcheries) — Nine (9) Hatcheries and 43 Distribution Units

	Number of Areas	Number of Miles	Number of Acres	Scheduled_
Streams Lakes	788 99	4,812.70	21,913.51 5,664.40	1,934,450 349,250
Lanco	887	4,812.70	27,577.91	2,283,700

FEDERAL STOCKING PROGRAM: Two (2) Hatcheries and three-Distribution Units

(Allegheny Hatchery)

Streams	11	53.40	157.90	18,400
Lakes				
	11	53.40	157.90	18,400
(Lamar Hatche	ry)		~	
Streams	3	3.50	30.80	10,050
Lakes	4	_	967.80	17,800
Lunco	7	3.50	998.60	27,850

TOTALS FOR STATE AND FEDERAL PROGRAMS:

Eleven (11) Hatcheries and 46 Distribution Units

Streams	802	4,869.60	22,102.21	1,962,900
Lakes	103	—	6,632.20	367,050
Lakes	905	4,869.60	28,734.41	2,329,950*

*Species: Approximately 27% — Brook Trout; 38% — Brown Trout; 35% —Rainbow Trout

COOPERATIVE NURSERY BRANCH (Estimate)	250,000
GRAND TOTAL OF ALL TROUT SCHEDULED (State, Federal, Cooperative Nursery)	2,579,950





Awards for the 1985 Biggest Fish of the Year were presented to Angler's Award recipients by Fish Commissioner J. Wayne Yorks. The presentations were made on February 10, 1986, at the Eastern Sports Show in Harrisburg. Award winners are: (front row, kneeling left to right) Bill Dwyer, Pittsburgh, sauger; Jack Scheirer, McMurray, coho salmon new state record, Kelly Brice, Wilkes-Barre, crappie; Kevin Beck, Dover, bluegill; Bill Grosklos, York, rainbow trout new state record; Fred Love, Three Springs, striped bass new state

record. Standing from left to right are: Mark Palmer, Leechburg, sheepshead; Gary Kropelak, Springdale, walleye; Kenneth Durst, Jr., Masury, Ohio, largemouth bass; Donita Schumack, Hazleton, American shad; Marlin Leister, New Bloomfield, sucker; Julie Harvey, Harrisburg, lake trout; Robert Szyomoniak, Glenshaw, smallmouth bass; Kenneth Wilt, Jr., York, rock bass; Mike Beck, Whitehall, musky; Scott Potteiger, Harrisburg, northern pike; and Larry Smith, Erie, white bass.

THE LAW & YOU

by Robert J. Perry

Q. While fishing for suckers last April in the Susquehanna River, I noticed a number of anglers fishing for and catching bass. Were these people committing a violation by fishing in closed season?

A. No. Bass season is open year-round on all rivers and streams (size limit is 10 inches). The season is also open year-round on Kinzua, Wallenpaupack, and Raystown lakes (size limit is 12 inches). On all lakes, ponds, and reservoirs, bass season is closed from April 12, 1986, to midnight June 13, 1986.

Q. I intend to take my 12-year-old nephew trout fishing on opening day. He will not have a fishing license. Will he be entitled to keep fish that he catches?

A. Yes. The laws and regulations provide for seasons, sizes, and creel limits, etc. The solitary exception to these for your nephew would be that license requirements do not apply to those under 16 years of age.

Q. I have an opportunity to fish during the first week of April 1986. I realize that the regular trout season does not begin until April 12, 1986. Is there any way I can legally fish for trout during the first week of April this year?

A. You may fish in specially regulated areas such as fly-fishing-only (no harvest) and/or catch-and-release areas. However, no trout may be killed or kept in possession in these areas. Fly-fishing-only/delayedharvest and fly-fishing-only areas may be fished any day of the year from one hour before sunrise to one hour after sunset, except on opening day, which begins at 8 a.m. No trout may be kept in possession from the last day in February to opening day of trout season. Specially regulated waters are listed in the 1986 Summary of Fishing Laws and Regulations, which can be obtained from any fishing license issuing agent.

Q. I plan to fish opening day (April 12, 1986) for trout, and would like to moor my boat at a Fish Commission lake. It has a current registration and is properly numbered. May I moor it on March 22, 1986?

A. No. Overnight mooring of boats on Fish Commission property is

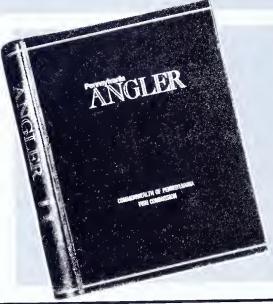
allowed only in designated mooring areas between April 1 and November 30 of each year. However, you may use your boat (unless otherwise posted) during the period December 1 to March 30, provided you launch and load on the same day.

Robert J. Perry is chief of the Commission Southeast Regional Law Enforcement Region.

Making fires

Warming your hands over an open fire may bring relief to your chilled, stinging hands, but it just might cost you \$25, too. If you enjoy cold-weather fishing, consult the regulations when you're on public property and check with the landowner when fishing on private land.

Starting, building, tending, and abandoning fires without legal consent of a landowner is against the law. Regulations governing most state-owned property also prohibit building fires, except in specially designated areas.



Angler Volumes Available

A few bound copies of *Pennsylvania* Angler Volume 54 (January 1985 through December 1985) are available. They contain the year's 12 issues and are hardbound in black with gold-colored inscription.

These bound volumes are offered on a first-come, first-served basis.

Each is available for \$20 for nonsubscribers and \$15 for current paid subscribers. Include your account number with your order. This number appears directly above your name on the magazine mailing label.

Make checks or money orders payable to *Pennsylvania Fish Commission*, and send orders to: *Angler* Circulation, Pennsylvania Fish
Commission, P.O. Box 1673,
Harrisburg, PA 17105-1673.

Anglers W Saw Everett

A 1½-inch to 2-inch minnow is a good bait for early season crappies. Rig them at different depths until you start to get bites, and then fish all your lines at that depth. Once you locate the fish with minnows, you may want to change to a bobber and jig. Yellow and white action-tailed lures are productive colors for jig heads.

One essential component of fishing a Texas-rigged plastic worm is to use razor-sharp hooks. The point of the hook has to penetrate the worm and the jaw of the bass, so hooks have to be extra sharp. Many anglers who regularly sharpen their hooks who have not done so regularly in the past claim that they have much more hook-ups with honed hooks.

Spoons can be fished in a variety of ways. They can be cast and retrieved at varying speeds, they can be jigged in deep water, and they can be used with weedless preparations to work heavy cover.

When you troll, before changing lures, try altering your trolling speed. Sometimes a fish follows your offering for some distance, and the change in speed can trigger a strike.

Do your boat lights work? Check out your boat's lighting and wiring before you plan to use it at night. Preventive maintenance can save time later on and let you fish and boat more when you want to

Do your feet always get wet at the launch ramp when you launch and retrieve your boat? High rubber boots are a good addition to your boating gear, so that each time you launch and retrieve, you can step into the water a little to work the bow hook without getting your feet wet every time.

When you wade into deep, swift water, loosen your wader belt to release some air, and then reclasp the belt. This maneuver lets just enough air out of the waders so that in deep water you won't be too buoyant and lose your footing.

When you fish worms on ultralight tackle for trout, try to work the offering under overhanging vegetation and through areas with undercut banks. These areas often hold large trout that wait for food to drift past them.



illustration by Rose Boegli



Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities

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Federation of Fly Fishers 1986 National Conclave

The Federation of Fly Fishers will hold its 1986 National Conclave at The Pennsylvania State University, University Park, PA, July 28 through August 2.

The first two days will be devoted to workshops on fly fishing and fly tying. The fly fishing workshop is for adult beginners and will cover topics such as stream entomology, equipment, casting, and presentation. There will be classes for both beginning and intermediate fly tyers.

Programs for the remainder of the conclave include presentations by notables like Joe Humphreys on night fishing, Lefty Kreh on casting techniques, Boyd Aigner on steelhead and Pacific Northwest salmon fishing, Bucky Metz on raising and processing birds for hackle, Flip Pallot on saltwater fly fishing, and Harry Murray on smallmouth bass fishing. Nori and Tadayuki (Ted) Tashiro of Yokohama, Japan, will present programs on fly tying and fly casting.

A registration fee covers all conclave costs, other than banquets, for federation members. All events, including luncheons and banquets, are open to non-members of the federation for a fee in addition to registration. A commercial exhibit area will be open July 30, 31, and August 1. Events are also planned for wives and children. Lodging in dormitories is available from the university. Average price of area hotels and motels is \$35 - \$45. A KOA campground is 10 miles from the campus. For more details, contact: Federation of Fly Fishers, P.O. Box 1088, West Yellowstone, MT 59758, or call 406-646-9541.

Knouse Foods Philanthropy

"From pollution to solution might be the way to describe a first and unique cooperative effort of the Knouse Foods Corporation with the Adams County Fish and Game Club." The quote was from the June 1972 *Pennsylvania Angler* and dealt with the first major effort of industry, cleaning up its own act and supporting a brand new cooperative nursery for the Adams County sportsmen at the same time. Dedication ceremonies were held in October 1972.

The food corporation's next philanthropic gesture on behalf of the Fish Commission cooperative nursery program came about a year later when Knouse Foods funded the cost of a new nursery for the Chambersburg Rod and Gun Club, Franklin County. A few years later, additional financial help was again given to the Franklin County club.

But the Knouse Food Corporation did not stop its support to the sportsmen of the two counties. The Adams County Fish and Game Club decided on a complete renovation of its nursery, converting the amesite raceways to cement ones and adding other improvements. Knouse again picked up the total bill.

Now, the point to be made is the example set by the Adams-Franklin food processing industry as one that other businesses and industrial complexes might want to follow. The thousands of dollars Knouse spent in each of the examples above were important. Perhaps more important was the cooperation and mutual concern for a vital water source that both organizations needed to function.

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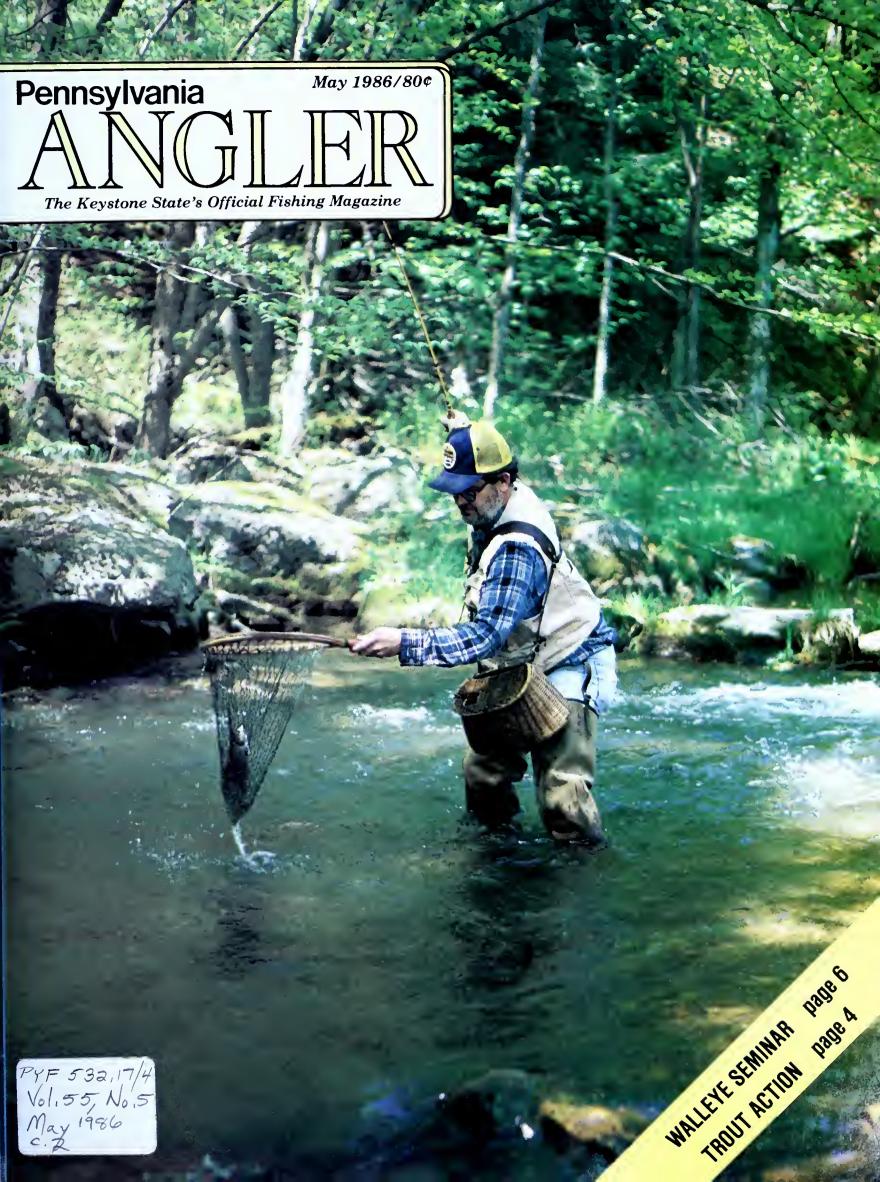
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Straight Talk

RESPONSIBILITY AND EXPLOITING NATURAL RESOURCES

After our February comments on this page related to soft coal, we had two letters of protest, but we also received a significant number of comments indicating agreement with our viewpoint. One of the comments that was critical of our position came from someone whose ox was apparently being gored, and they asked why we weren't doing something about other polluters. We thought we had clearly explained that we were just talking about coal in that particular item, so we thought best to give you a little more detailed picture of the whole thing.



Ralph W. Abele Executive Director Pennsylvania Fish Commission

Out of almost 12,000 prosecutions for violations of the Fish and Boat Code and other statutes within our authority, 565 cases of water pollution and stream disturbances were investigated and prosecuted. Of those cases, 498 were closed, and 67 are still pending. The types of pollution and stream disturbances involved included poisons/pesticides, manure, food products, chemicals, metals, oil and gas drilling, water systems, railroads, boat discharges, stream channelizations, stream crossings, erosion/sedimentation, construction, fertilizers, coal mining, paper products, petroleum products, sewers, swimming pools, truck spills, pipelines, stream banks, stream filling, wetlands, and siltation.

If we had to pick on the source of the most cases, we would have to say it is the petroleum production and/or mishandling of petroleum products.

Looking back over almost 15 years of commenting on this page, we have referred to those activities more than 10 times. The newest complaints on our part came at the same time as the most recent energy crisis and the muddying of our waters by oil and gas exploration and development. In 1986, we had to take a stream off our stocking list because of posting protesting the relatively new oil and gas law. These people have been relatively unregulated for so long that even the current rather mild regulations are too much for some of them.

Oil and gas development, particularly in the northwestern part of the state, had accelerated immensely, and because of the problems that accompany such development, it has been necessary for the U.S. Environmental Protection Agency, U.S. Coast Guard, the Pennsylvania Fish Commission, and DER to spend much time on their onthe-ground strike forces to clean up what has been lumped together as "one large oil spill."

In less than a year, the agencies have spent over \$2 million in the

effort, and some positive results are beginning to show. More than 300 sites in northwestern Pennsylvania have been identified where oil wells, pits, and pipelines have leaked oil into the streams. Due to oil spillage, many of the once prime trout streams in the Allegheny National Forest are now incapable of supporting a reproducing trout population, while others are totally sterile. The industry claims that these spills are minute, but the deleterious effects on the streams are evidence that these spills and leaks are quite significant. Brine is even more deadly to the streams.

Fortunately, this new enforcement effort is getting some results and cleanups, either by the industry itself or by the Coast Guard's contractors with the final bill paid by the producer.

Perhaps one of the beneficial results of the current OPEC disagreements and the downward plunge of oil prices will be the effect of discouraging irresponsible development. It is almost predictable that some automobile manufacturers will bring back gasguzzlers as they look at this very short-term phenomenon in the use of finite resources.

Ten years ago we quoted the National Academy of Science as saying, "The next generation is destined to be the major participant in a process whereby in a brief instant of historic time the entirety of the underground resources of liquid and gaseous fossil hydrocarbons will have been irreversibly consumed. Yet we have scarcely begun to arrange for what is to happen when the stores of petroleum and natural gas will be exhausted during the lifetimes of persons already born."

During that short period, it is not asking too much for us to demand total responsibility on the part of those exploiting natural resources. Their individual motivations are not necessarily evil, but added together they are not adequate for safeguarding the values of a democratic community.

Fælk W. Dhele

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Pennsylvania ANGLER

May 1986 Vol. 55 No. 5

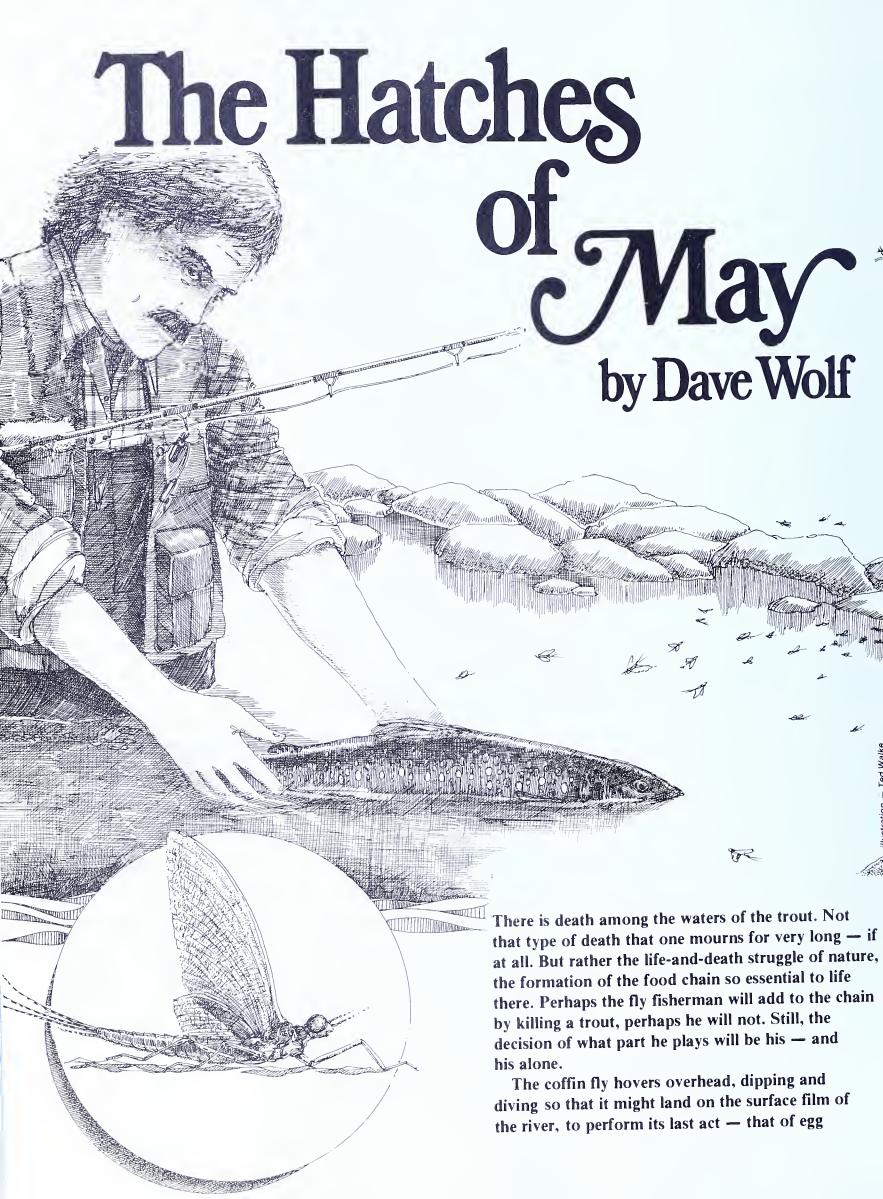
The Hatches of May by Dave Wolf This month offers something very special to fly fishermen
A Pennsylvania Walleye Fishing Seminar by Darl Black Pennsylvania walleye fishing experts tell their secrets of success
Boating and the Effects of Alcohol by Larry Shaffer Heed the warning of this insidious danger
The Black Caddis Revisited by Chauncy K. Lively Take a fresh look at a classic producer
County Features—Schuylkill County by Gary L. Slutter and Northumberland County by Ronald L. Hoffman
Shad-Taking Techniques by Dave Wonderlich Let this information help you bone up on the tactics to score on shad in a variety of fishing conditions
"Do-Nothing" for More Crappies by Jim Gronaw This easy technique can help you catch more panfish
Catfish by the Bushel by Gary Diamond Catching catfish isn't as easy as you might think, but if you use these ideas, you can increase your chances of hooking up with big ones 2



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The Cover

The front cover, photographed by Chris Dolnack, shows an angler on Hicks Run, Cameron County, netting a trout that took a streamer fly. For more details on fly fishing for trout this month, see the article that begins on page 4. If shad fishing interests you, the information on page 20 could be useful. Panfish enthusiasts will want to check out the angling strategy detailed in the article beginning on page 24, and anyone who wants to catch some nice walleye shouldn't miss the feature on page 6.



laying that will assure the survival of her species. Beneath the surface a trout, born of the river, notices the struggle, and with little hesitation utilizes the resource provided to him.

Unknown to the trout, a fisherman lays a long line on the water. Attached to the end of a 6x leader, a neatly tied drake cocks upon the moving water, the trout again notices the fly, rises quickly, and finds the sting of the barb. The food chain is now complete.

You will find the river in May with all the glorious hatches from the famous Green Drake to the old standby Cahill and March Brown. But the river in May is teeming with life, and trout are well aware that food is abundant now, perhaps more so than any other month. Especially the mayfly hatches that now come nearly nightly and caddises that dip and dive over the waters.

Green Drake hatch

There have been many good Mays for me, especially where the Green Drake is concerned. Nothing is concrete in fishing, and I like it that way. But usually, the tag end of May signals the start of the Green Drake hatch, perhaps the most impressive hatch to take place on Pennsylvania waters. I often think that all the hoopla comes from the fact that the drake is such a large fly, not to go unnoticed by even the most casual anglers.

And most large trout cannot resist the tempting offering. Most assume that the largest trout of the year to be taken on dry flies are taken on the drake imitation. When conditions are right, they will receive little argument. The drakes are best attended during the evening hours when the spinner fall is most prevalent. Duns usually are present during the evening, too, although they may appear in the morning or even throughout the day.

My most memorable experience with the Green Drake was on the First Fork of the Sinnemahoning when by luck I ran into a good drake hatch at II a.m. The flies were coming off the water in good numbers. It was a cool overcast day, and the drakes continued to hatch for a period of six hours, hardly a usual situation. There was a minor hatch of Cahills in progress at the same time, and I enjoyed the circumstances immensely.

By 6 o'clock, I had caught and released over 60 trout ranging in size from 5 inches to 18 inches.

Little did 1 realize that the best was yet to come, because around 7 the spinner or coffin fly started to dip and dive over the water. I took 20 more trout from 7 to 9:30. Three were over 16 inches and one was over 20. But that is the exception, not the rule.

I also recall a year in which the drakes did not appear at all, or so I thought. I had scouted the lower section of the Fork night after night. On the Fork, the lower section waters warm first and the hatch starts there and progresses to the headwaters, with the hatch moving upstream from one night to the next. If the hatch can be found on the lower sections, one can enjoy two full weeks of the drake following the hatch upstream.

Each night I would scout the river for signs of the drake — nothing. There were drakes clinging to the streamside vegetation but no hatch could be found. They had to hatch after dark. I found them on a moonless night around 10 p.m. The hatch was good and the trout were taking well, and I did have good fishing after dark, but I prefer my fishing of the drake during the daylight hours.

Still, other years high waters would not allow the fishing of the hatch. The high murky waters cancelled fishing entirely, and all one could do was wait for the following year. Frustrating, watching a hatch in progress, and not be able to fish.

Sulphur hatch

Still, despite all the clamor over the drake, the sulphur may even be better. I have found hatching drakes mingled with a spinner fall of sulphurs, and although the sulphur is much smaller, the trout took the sulphur spinner over the drake time and again.

Sulphur hatches seem to be more consistent and often in greater numbers than the drake, and fishing a spinner fall of sulphurs is hard to beat, especially on limestoners.

And big trout do come to sulphur spinners. My largest was a good heavy 24-inch brown from the waters of Kettle Creek. A larger brown came from the Paradise three years ago, but I would not dare to estimate its size.

Regardless of the hatch, May is the

month to be there. I would begin a typical day, fishing caddis imitations in the morning, terrestrials during the afternoon hours, and meeting the hatch in the evening.

As in all fly fishing, observation is the key. A trout sipping during midday along an overgrown bank is more than likely taking terrestrials. A well-cast and floated ant or beetle should take him. Evening hatches should be easy to identify, but don't let a larger fly conceal the smaller one, as with the drake hatch, masking the spinner fall of sulphurs. The trout were simply not taking the drakes. They were sipping the smaller sulphurs, ignoring the drakes completely. A little observation goes a long way.

Caddises

In May I like the caddis, in particular the grizzly caddis on a number 16 as a searching pattern. There are usually enough caddis flies around in May so that the trout are accustomed to seeing them. I have probably taken more trout on this pattern than any other.

Beware of your float. You may have the best pattern in the world, but if it is not floated over the trout properly it will be ignored. I like light leaders, 7x on flies 16 to 20, because I feel that it helped my drag-free float, but don't be afraid to cast down and across the current in order to achieve the desired result.

Finally, don't give up on a trout that continues to feed. The right float will take him. I have cast over the same trout as many as 30 times before he has taken, and I did not change patterns or leaders. The float was finally right and he took.

The month of May. A good rod, a vest full of patterns, a fine leader, and the proper float will bring trout to the net. But it is in the living of it that you will find a greater understanding of the life-and-death struggle of a trout stream's inhabitants. Perhaps a circling hawk will greet you, a wild turkey may talk to you, and a whitetail will gaze at you. But most of all, you might find yourself in the month of May.

Dave Wolf coordinates the Fish Commission Adopt-a-Stream program and heads media relations.

APennsylvania Walleye Fishing Seminar by Darl Black

he walleye is one of the most sought-after fish in the Commonwealth. Unlike the bass or musky, the walleye's popularity is due more to extraordinary eating quality than to its on-the-line fighting ability. But don't underestimate the walleye; a six-pounder can put up quite a tussle, and a 10-pounder can test your stamina.

To achieve a well-rounded understanding of fishing approaches for this fine fish, I talked at length with knowledgeable walleye anglers around the state who pursue ole' glass-eyes in a wide range of habitat.

- Mark Ammon hails from Wagontown in the southeast section of our state. He lists Marsh Creek Lake, Blue Marsh Lake, and Struble Lake as favorite waters. Mark caught his largest Pennsylvania walleye in early August of 1982 in Marsh Creek Lake at 10:30 p.m. in 1½ feet of water on a surface lure.
- Ralph Corvaglia resides in the city of Erie, so with 10 years on the big lake, he stakes the claim as our Lake Erie authority. That's where his largest walleye (just over 10 pounds) came from in 1984.
- Dave Hornstein of Meadville has spent 20 years fishing western Pennsylvania for every species of fish, but is partial to walleye. Dave's home waters include Pymatuning Lake, Conneaut Lake, and French Creek. Pymatuning gave up an 11 pound 'eye to Dave a few years ago.
- Bill Huffnagle resides in Bloomsburg, but he spends so much time on the Susquehanna River near Sunbury that he calls it his second home. He says the Susquehanna is "the most underfished river in the Commonwealth." With over 30 years of walleye fishing in his pocket, Bill's biggest was a 12-pound walleye caught from his favorite stretch of the river.

Pennsylvania walleye season opens early in May. A Pennsylvania angler asks your advice on where to go in your region to catch a mess of eating-sized walleye. To what water would you direct the angler and what tactics would you recommend?

HUFFNAGLE: I would direct the angler to the area just below the Fabridam on the Susquehanna River at Sunbury. The water will probably still be high, and if it hasn't warmed yet, there will be some hold-over winter walleye around.

I would use the same thing there I use most of the year to catch walleye—jigs. Try a white or yellow deer hair jig; a yellow Mister Twister; a silver Super Shad or Sassy Shad; or a plain jighead with a 3-inch to 5-inch minnow.

I use a 1/16-ounce jighead most of the time, but will drop to a 1/32-ounce or go up to a ½-ounce depending on the current. To fish slow enough to be effective, anything

from a 1/4-ounce on up will snag too much on the bottom.

AMMON: I suggest the angler go to Marsh Creek and fish points, stream inlets, and the mouths of coves. Look for hard bottom and rocky shoreline. With the water temperature below 50 degrees, fish water depths of 20 feet, or maybe as deep as 30 feet. In water temperatures above 50 degrees, the fish can be caught in 8 to 15 feet of water. I would use ½-ounce and ½-ounce jigs, or a crawler on a worm harness.

HORNSTEIN: My advice would be to fish Pymatuning because the walleye have started to recover from the spawn and usually feed heavily during the entire month of May. Pymatuning is an off-color, shallow lake that warms earlier than other area waterways. The water temperature should be in the 50s.

I recommend very slow trolling with lures such as Hot 'N Tots, Wiggle Warts, and Benos over stump flats with 8 to 12 feet of water, allowing the crankbait to tick bottom every once in a while. Also, try a nightcrawler harness later in May as the water warms.

CORVAGLIA: There is no closed season for walleye on Lake Erie, so anglers can begin fishing for them soon after ice-out. In May, your best bet is to cast or troll Rapalas, or other shallow-running plugs, in 10 to 15 feet of water near the mouths of tributary streams. The rainbow trout pattern Rapala is a favorite of mine for early season walleye.

By the middle of summer, walleye have changed locations and altered their forage preferences. Describe your favorite tactics for summertime walleye.

HUFFNAGLE: I switch to lakes! Walleye are just about non-existent in the river in the summer. I am convinced that most of the walleye move down river to the wider stretches where baitfish are abundant. While some are taken at night, there is no daytime activity.

For summer lakes, I suggest Wallenpaupack, Raystown, or Kinzua. You need to fish slow and deep just above the thermocline, which you can locate with a temperature probe. If you don't have a probe, a common thermometer will do. I use the same lures in the summer as in the spring—jigs and live minnows.

AMMON: During mid-summer, I fish shallower waters along weed beds in depths from 2 to 10 feet. I use a trio of lures—small Rapalas, Augertail jigs, and crawlers on a harness

I begin by trolling a worm harness or Rapala back and forth across an area known to hold walleye. When I pick up a fish, I back off the area and throw jigs. Sometimes the fish only take a jig bounced on the bottom; other times you have to swim the jig several feet off the bottom.

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For complete details on Pennsylvania's biggest walleye caught in 1985, study the information on page 10—gleaned from the Angler's Awards offered for walleye in the Commission's Angler Recognition Program.

HORNSTEIN: In summertime, my favorite method on natural lakes is to fish with a nightcrawler along the outside edge of weeds. I just use a size 6 or size 4 Aberdeen hook—an Eagle Claw 214 or Mustad 3261—and splitshot on 8-pound-test line.

I stay in the fringe of the weed bed, with the depth somewhere around 9 to 12 feet; the depth of weed growth varies, depending on the water clarity. I try to find something out of the ordinary in the weedline, such as a finger with sparse weed growth. Simply cast parallel to the weedline, let the crawler sink, and reel in very slowly dragging the bait along the bottom. Take a lot of crawlers with you!

CORVAGLIA: The summer walleye fishery on Lake Erie has undergone radical changes in the last two years, with walleye now found suspended in deep water. Although some walleye are still taken in the near-shore area, during recent seasons, less than 10 percent of my total catch has

been from water with a depth of less than 50 feet.

My experience shows that you will rarely find walleye more than 5 feet off the bottom in water less than 30 feet deep. However, as you move to deeper water, suspension becomes more of a factor, and the fish may be at any depth. Trolling artificials has accounted for the majority of my walleye, with worm harness rigs in second place.

By mid-summer of 1985, Lake Erie was in the midst of the most incredible walleye season ever for sport anglers. We quickly learned that walleye would hit salmon lures, so tinsel flies and squids trailed behind dodgers, as well as spoons like the Alpina Diamonds or Northport Nailers, were all added to our walleye arsenal.

The largest concentration of walleye this past season was located out of Walnut Creek in the First and Second trenches, 4 to 7 miles out. Most of the walleye were suspended 35 feet below the surface over bottom depths of 55 to 80 feet; some were right on the bottom.

Early in the season l began using wire line to get my lures to the fish and to remove the hassle of operating downriggers while controlling the boat in rough and windy conditions.

My top producing artificials in 1985 were Bagley's Killer B II in blue or green foil; Bagley's Salmon Snack in green or orange fluorescent; Bomber Model 8A in fire tiger, black, or red; Storm's Wiggle Warts in chartreuse, green with black stripe, white, or perch; and flutter spoons in yellow/green, blue, pearl, or green.

Besides wire line trolling, other effective techniques were: running flutter spoons behind a Pink Lady, Deep Six, or Dipsy Diver; plugs, flutter spoons, or worm harness rigs off downriggers; and flat-lining monofilament with 3 to 4 ounces of lead to take the bait down.

What are your recommendations on rods, reels, and lines for walleve fishing?

AMMON: I like to use medium-action graphite rods in 6½-foot to 7-foot lengths. My spinning reel is spooled with 6-pound or 8-pound test.

HUFFNAGLE: I am an ultralight nut, and I make my own rods. I like a rod length of 4½ to 5 feet, with 2- to 6-pound-test line. You'll lose more lures with light line—lures, not more fish—because the outfit can handle the walleye. If you're not hung up every third or fourth cast, then you're fishing your jig too fast.

HORNSTEIN: I recommend using a good quality graphite or boron rod, especially when jigging or using live bait. Use a quality line and re-spool often. I only use openface spinning reels with anti-reverse because I always back reel a big fish when it makes a run, rather than relying on the drag.

For fishing jigs, or working weedlines with crawlers or minnows, I use a 51/4-foot or 53/4-foot bass-action rod and 6-or 8-pound-test monofilament. When trolling, I use a 6-foot graphite bass-action rod with 8- to 14-pound test (lighter lines on clean bottom, heavier lines for areas with a lot of rock or wood).

CORVAGLIA: It takes several outfits to cover all the options on Lake Erie.

For casting bait and lures: a 6-foot to 7-foot, light or medium action spinning rod, with 6- to 10-pound-test quality monofilament.

For flat-line trolling: a 7-foot to 8½-foot, medium or medium-heavy action long-handled casting rod; a fast-ratio level-wind reel with star drag; and 8- to 10-pound-test monofilament.

For wire line trolling: a 7½-foot to 8½-foot, medium or medium-heavy long-handled casting rod with a soft tip and good backbone; a level-wind star-drag reel; and 12- to 15-pound stainless steel trolling wire. I usually fish a 16- to 20-pound 36-inch monofilament shock leader between the wire and the lure.

What time of the year or under what conditions do you fish live bait instead of artificials?

AMMON: I use crawlers or minnows when I can't catch any walleye on lures. I usually go to live bait on clear, bright days.

CORVAGLIA: My favorite live bait rod is a nightcrawler on a willow leaf spinner. The walleye are often picky over colors, so be sure to have several different color blades with you.

I can't list the conditions when Erie walleye prefer live bait; it's just a matter of experimentation.

HORNSTEIN: In the spring and fall cold-water periods, my favorite lures are jigs or jump-type baits. During the late spring and summer periods I prefer to troll crankbaits.

I use crawlers in the early summer into fall. In the early fall I like suckers; but as the water gets colder in November and December, I switch to shiners because they have more flash and are livelier in cold water.

HUFFNAGLE: I prefer live bait over artificials in cloudy water. When the water clears up, lures do better. Here is my rule of thumb: If you stick the top section of your rod in the water and can still see the tip when the water reaches the first guide down from the tip, then the water is clear enough to get fish on artificials.

Of all the electronic and mechanical aids available to the angler today, which ones do you find valuable to your walleye fishing?

HORNSTEIN: I think the most important aid to an angler today is some type of depthfinder. I rely on my flasher 90 percent of the time. Once a good structure is located on the flasher, I take a closer look with a chart recorder. However, if I could only buy one piece of equipment, it would be a flasher.

AMMON: I use a flasher or LCD to locate structure and baitfish. I use a temperature probe to check different depths for my records. In the summer, walleye move into very shallow water at night to feed when the water temperature is around 70 degrees.

HUFFNAGLE: As far as river fishing is concerned, there isn't much deep water to make a depthfinder practical, and the temperature is basically the same from top to bottom.

For the river angler, reading the current is vital and there is no electronic device to do that, just experience and good vision. When the river is at normal flow it is best to search the main river for obstructions that create slack water next to swift current. Walleye don't like to fight the current, so they lie right at the edge. When the river is high, look for current flowing in the opposite direction of the main river flow. High water is a good time to hunt fish in the backwaters.

When you fish Lake Erie for walleye, be sure your boat is appropriate for offshore trips, and equip it properly. A good compass, a VHF radio, and Loran play key roles in your safety and in your fishing success.



CORVAGLIA: The first two pieces of equipment that I would put on any boat for Lake Erie are a good compass and VHF marine radio. These basic navigation and communication aids play a key role in successful angling on this large body of water. The information gathered on my radio has given me the location where fish were being caught, color of lures, and depth.

The next instrument would be some form of sonar. A flasher, video, or graph recorder provides the operator with similar information.

The last piece is a Loran C, which has become one of my most important offshore fishing tools. Its pinpoint navigational capabilities enable me to return consistently to



the same spot on the big water where visible markers are not available.

What do you consider the peak time of year for catching walleve?

CORVAGLIA: The peak time of the year for walleye on Erie has been from the end of June through the middle of September.

HUFFNAGLE: The peak time in the river is from November until the river freezes over. If you're lucky, you may be able to fish into January, but the river usually gets slush ice by Christmas.

HORNSTEIN: This question is very hard to answer

because the lakes and rivers I fish all peak at different times. When one slows, I switch to another. Pymatuning is hot in May, followed by Conneaut Lake in late June and early July, Lake Erie in late July and August, and finally French Creek in November and December. Generally, I would say that summer is the peak time for numbers of fish, but fall is best for trophy walleye.

In your opinion, what is the best time of the day to fish for walleye?

AMMON: Early morning and early evening into dark. CORVAGLIA: Normally, morning and evening are best, but in deep water, the walleye hit any time during the day.



HORNSTEIN: I like the low light period of early morning and late evening. As a general rule in summer, if skies are overcast, the walleye will bite all day. But in late fall, a sunny day may turn the fish on.

HUFFNAGLE: In summer, I would say a half-hour before dark to a half-hour before daylight. In winter, I don't think it really matters.

What additional tips do you have for Pennsylvania walleye anglers?

AMMON: Walleye can hit very lightly at times, so don't go with a heavy-action rod or heavy line.

CORVAGLIA: On Lake Erie, fish can move in and out of an area quickly, so it is important to know what is happening on a daily basis. The best places for up-to-theminute information are bait shops, boat ramps, and the VHF marine radio.

HORNSTEIN: Try to fish lakes or rivers when they are peaking. Pennsylvania has enough quality walleye waters to keep you busy during the entire open-water season. Don't put your rods away on Labor Day—fall is lunker time.

HUFFNAGLE: The worst possible conditions for fishing are probably the best conditions for catching walleye. Cold, miserable, windy, and rainy—that is walleye weather. I have sat in a boat when I thought I was going to freeze to death, and still caught walleye. You don't have to be crazy, but it helps!

Senior Angler's Awards for Walleye — 1985

total of 35 Senior Angler's Awards was offered for 1985 walleye catches. Here are the details of Pennsylvania's best walleye catches in 1985.

Of the 35 total, 17 were caught in Lake Erie, five were caught in Lake Arthur, four were fooled in the Allegheny Reservoir, three came from the Allegheny River (one each in Allegheny, Forest, and Armstrong counties), two were taken from Lake Wilhelm, two were caught in Beltzville Lake, and one each came from Opossum Lake (Cumberland County) and Maiden Creek (Berks County).

Here are the months in which anglers made their catches with the number of walleye taken: January, 1; February, 3; March, 0; April, 1; May, 2; June, 7; July, 5; August, 5; September, 5; October, 5; November, 0; and December, 1.

Live baits accounted for 10 big 'eyes. Two were taken on minnows, worms fooled five, and suckers brought in three. A combination spinner and worm caught one.

Artificials accounted for the rest, 24. A plastic worm took one, jigs caught four, spinners and spoons each caught one, and diving plugs accounted for 17.

For more details on the Fish Commission's Angler Recognition Program, which includes Senior Angler's Awards, send a business-sized stamped, self-addressed envelope with requests to: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

Boating and the Effects of Alcohol



by Larry Shaffer

s we move into the warmer months of the year, we anxiously look forward to spending as many fun-filled days on the water as we possibly can. Boating in Pennsylvania is growing by leaps and bounds, but unfortunately, not without problems.

Boating accidents continue to be a fact of life—or in too many instances—a fact of death. During 1985, 16 persons lost their lives in boating accidents in Pennsylvania, and in many cases, alcohol played a part in the tragedy. Studies have shown that alcoholic beverages are a contributing factor in more than 50 percent of the boating fatalities recorded nationwide. That's a frightening figure.

Drinking and operating a boat is no different from drinking and driving an automobile or truck. It all starts Officer Don Heiner, Cumberland County, is used to help an officer determine if a boat operator should be given a more formal breath test at a municipal police department or a state police barracks.

innocently enough. A couple of friends in a boat or canoe, out for an afternoon of fun and relaxation. They may be on a river, a smaller stream, or one of the many lakes in Pennsylvania. It's a warm day, and a cooler full of beer seems to be one way to find relief from the heat.

But then something happens; the craft capsizes for one reason or another, or someone simply falls overboard, or there's a collision. In any event, someone ends up unexpectedly in the water. He's probably physically fit and a good swimmer, but in spite of that, the afternoon ends in tragedy. An investigation shows a high level of alcohol content in the blood. Another needless loss of life.

Why? What happens with even just a moderate intake of alcohol? Several things. Lack of stability, for one. Even though undetected by the person involved, his balance is greatly lessened. Falls overboard and capsizing of boats under 16 feet are the primary causes of boating fatalities, and alcohol simply compounds the problem. These small crafts are a poor place to experiment with balance.

Studies show that, inebriated, a person is probably unable to swim, even though sober he may be an excellent swimmer. What's worse, thrown unexpectedly into the water and a bit tipsy, he's confused, scared, and cold. The water is dark and murky. He is just as likely to swim downward—to drown—as he is to swim up to safety.

Also affected by alcohol is the capacity to receive and integrate signals sent from the various sensory organs to the brain. It is difficult to sort out these signals and combine them into meaningful actions; reaction time can be doubled.

Furthermore, alcohol reduces inhibitions, especially in risk-taking situations. A person under the influence is more apt to try dangerous feats or stunts that he would not consider when sober. Mr. Milquetoast suddenly and tragically becomes macho-man.

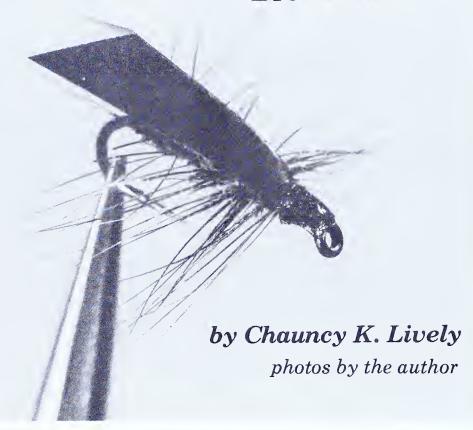
Finally, vision is affected by alcohol and becomes especially critical at night. Recovery time from glare following exposure to bright lights can be delayed 20 to 50 percent, and may take up to six hours to return to normal or to pre-drink glare recovery time. In addition, intoxicated persons lose their ability to see primary colors at night (such as red and green). Isn't it frightening when we realize that red and green lights control traffic on our streets?

Drinking while boating is dangerous. Think about it.

PA

Larry Shaffer creates and produces the Fish Commission's weekly radio broadcasts, from which this article is adapted. Commission broadcasts can be heard on 70 AM and FM radio stations throughout Pennsylvania.

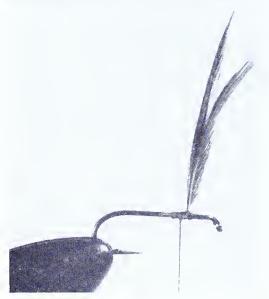
The Little Black Caddis Revisited



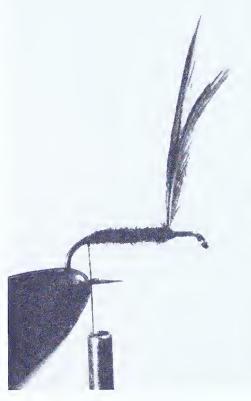
Fly fishing has been the beneficiary of many a technological advancement, and fly tying has similarly benefitted from the advent of man-made materials, especially plastic.

John Betts has been a pioneer in the adaptation of synthetic materials to fly tying, and many of us owe him a debt of gratitude for his pathfinding efforts. His contributions range from aerodynamic mayfly wings of polyethylene film (from Ziploc bags) to near-perfect tailing material of synthetic sable artist brush fibers.

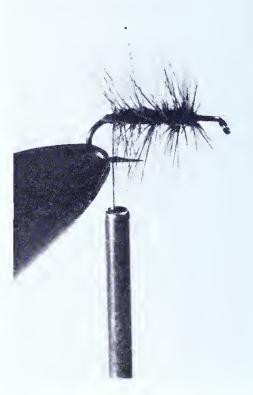
In the February 1984 Angler, we described the Palmer Dark Blue Quill pattern, a mayfly-type dry fly that utilizes Betts-style wings of trash bag plastic. This material is lightweight and tough. I particularly like Hefty Steel-Sak bags in 1.5 mil or 2 mil thickness; however, I'm sure other brands of similar weight provide excellent winging material. The Steel-Sak bags are metallic gray on one side and black on the other, making the material suitable for other fly tying uses, such as nymph wing cases. It is also eminently useful for certain caddis fly wings. So it was that a



Clamp a size 16 or 18 regular-shank dry fly hook in your shank length behind the eye. Select one each brown and black hackle of good quality and strip off the webby lower barbules. Hold the hackles together, perpendicular to the shank with the dull sides facing the hook eye. Tie in the hackles with criss-cross turns and bind the stems back along the shank with three or four turns. Trim the excess stems.



Wax the thread next to the shank and apply a thin dubbing of black fur or synthetic. Wind the dubbing from behind the tied-in hackle to the bend, forming a tapered body.



Grip the tip of the rear hackle with hackle pliers and wind, open-palmer fashion, to the bend. Tie off and trim the excess hackle tip. Repeat this step with the second hackle, following the course of the first.

favorite caddis pattern was given new, longer-wearing clothes.

The early Black Caddis, which we first described on these pages in November 1972, was dressed with a wing cut from a black-dyed duck wing quill. It was pre-coated with vinyl cement for durability and folded lengthwise to simulate the rooflike posture of caddis wings. As everyone knows, quill wings are notoriously fragile, and trout, with their needle-sharp teeth, show little respect for frail materials. The vinyl coating, though it added a little weight to the fly, extended the wing's longevity. Even so, the quill material would eventually split, and the essential caddis-like shape was altered or lost. The Little Black Caddis now has a wing of trash bag plastic, and not only is the fly lighter in weight, but its useful life is longer.

Our method of dressing plastic caddis wings is a simple, straight-forward procedure, if not a bit unorthodox. Here's how it's done:

First, cut a rectangular strip of the material 3/16-inch to ½-inch wide and as long as 1½ times the overall hook

length. Fold the strip lengthwise and make a sharp crease by pressing your thumbnail along the folded edge. If Steel-Sak material is used, fold it with the metallic side inside. Then trim a taper along the outside edges to reduce the width of one end of the folded strip to about one-half the other.

At this stage the pattern's body and hackle will have been dressed, and you won't want to disturb them. The thread will now be suspended just ahead of the body's fore end. With the right hand, pick up the folded wing by the tip of the narrow end and hold it in place over the body, creased edge up. With the edges straddling the shank behind the eye, tie in the wing as you would wet fly wings—but left-handed!

Actually, if you're a righty, this is not as awkward as it sounds. Simply hold the material with the right hand and use the pinch-grip to guide a slack loop made with the left hand. Draw the thread firmly downward; then, without releasing the right hand grip, repeat with another slack loop and tighten. Allow the thread to hang under the weight of the bobbin and release your

right hand grip. The wing should now be in place with the bottom edges aligned with the shank. Make three firm turns toward the eye and trim the excess plastic.

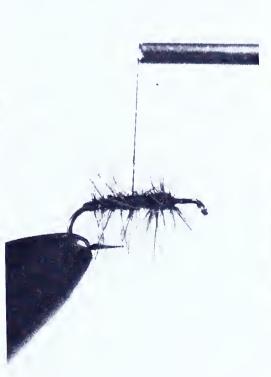
The left-handed procedure protects the hackling, which would be crushed if the wing were held conventionally with the left hand.

The Little Black Caddis represents the *Chimarrha* caddis flies common to many of our streams. Although they generally emerge from late April to early June, I have seen them scurrying through the dew-covered grass along Falling Spring early on August mornings.

Most caddis flies are of varying shades of buff, brown, or gray, and it is often possible to interchange patterns successfully provided the size is consistent with the naturals. However, the blackish appearance of the *Chimarrhas* is so distinctive, it's difficult to find a successful substitute from the more somber patterns. That's why I always like to have a supply of the Little Black Caddis on hand. Sizes 16 and 18 are appropriate.



With fine-pointed scissors, trim the hackle close to the top of the shank.



Wind the thread in spaced turns toward the eye, taking care to avoid binding down the wound hackle barbules. Half-hitch at the fore end of the body.



For the wing, tie in a folded strip of black trash bag plastic (see text for detailed information). Then, as shown, cut the rear of the wing at an angle; then trim the hackle underneath the body. Finally, build a neat head with thread, whip-finish, and apply head lacquer.

County Features

Schuylkill and Northumberland

Counties

Schuylkill County by Gary L. Slutter

Schuylkill County's varied terrain of forested mountains, rolling hills, and deep valleys offers the angler an array of fishing areas and types. From fast-flowing trout streams like Cold Run to the slower-flowing Schuylkill River, through the small reservoirs like Pumping Station Dam, to larger impoundments like Tuscarora Lake, fishermen can expect to catch trout, bass, walleye, crappies, catfish, and muskies. And the fishing outlook is getting better all the time.

Tuscarora Lake

This 100-acre lake, located in Tuscarora State Park, has the greatest variety of fish in the county. Here fishermen catch smallmouth and largemouth bass, walleye, tiger muskies, trout, crappies, perch, bluegills, catfish, and suckers.

The best bass fishing is at night, after the activity of the park has stopped. The best baits are minnows and imitation-minnow lures. Most walleye caught at the lake are also taken at night, and minnows and nightcrawlers are the top baits. A great time to fish here for stocked trout is after the June stocking, using mealworms and spinners, and in October and November, again with mealworms and spinners providing the best action.

Once the lake gets a safe covering of ice, fishermen using mealworms and jigs do well in the upper third of the lake. Perch are caught year-round, with the best angling occurring after ice-out when they are spawning. Ice fishermen also do well using jigs and small minnows for perch. Most muskies are caught by fishermen who seek other types of fish, usually on large minnows and lures.

Boating is permitted, but electric motors only are allowed. There is a boat rental on the lake, which is open weekends from the beginning of trout season until June, when it's open daily until September. A launch ramp, overnight mooring, picnicking, and sanitary facilities are available at the park as well.

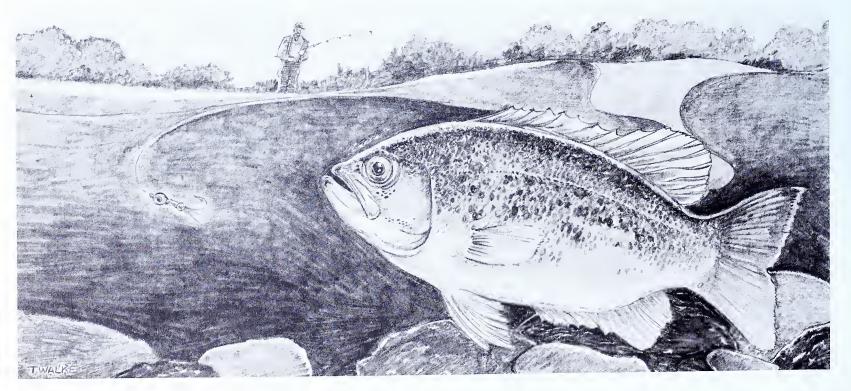
To find the lake, go to Barnesville, which is on Route 54 between 1-81 and Route 309. Follow the signs to the park.

Sweet Arrow Lake

This 96-acre waterway is northeast of Pine Grove Borough. Head north out of Pine Grove on Route 125, then make a right turn on Sweet Arrow Lake Road. The lake is two miles away. Most of the lake is bordered by this road on its north shore. Also on this road is the Sweet Arrow Lake Fish Commission access area, which has a boat launch, overnight mooring, and parking available. Electric motors are allowed as well as non-powered craft.

Fish available here include largemouth bass, pickerel, tiger muskies, crappies, perch, bluegills, catfish, and suckers. The best time to fish for bass is right after ice-out, and at night during the summer. Prime baits are minnows, purple plastic worms, and black Jitterbugs. Angling from a boat will allow you to fish near and under the many docks on the private south shore.

Crappie action is at its best in spring, with hair jigs and





small twisters ranking tops. Ice fishermen do well on pickerel and crappies, with minnows the best bait. Any time there is a good rainstorm, you'll find sucker fishermen where several small streams enter the lake. They do well with small worms.

Schuylkill River

The finest fishing in the Schuylkill starts near Landingville at Auburn Dam, and gets better as you get closer to the Schuylkill-Berks county line below Port Clinton. On the 200-acre Auburn Dam pool, fishermen and boaters have a Fish Commission access area from which to launch their boats. Fishermen catch largemouth bass, crappies, catfish, and suckers in this part of the river. Fish along the outside bend of the river under the brush with black plastic worms for the best action, and near the lily pads is another good bet.

You will have to look for crappies, but the dam area is a good place to start. Catfish can be caught any place you can gain access to the river. Near the upper end of the dam where Red Creek enters is the best place to fish for suckers, especially after a hard rainstorm. Most fish seem to hit from early spring until late fall. On weekends, during warm weather, it is best early in the morning before the water skiers get started. Minnows and worms are good selections for all-around fishing, with plastic worms and plugs filling the bill for bass.

Below the dam, access is available only where roadways cross the river, such as Route 895 near Auburn, Route 61 below Port Clinton, and several small roads in between. Fishermen can expect to catch largemouth and smallmouth bass and catfish in this section of the river. Top baits are minnows and nightcrawlers. Walleye were stocked in 1985 near Port Clinton, and one day they will also be available.

A good way to fish the river between Auburn Dam and Port Clinton is to float it. The waterway has several bends that are not near any roads, and you usually have these areas all to yourself.

Little Schuylkill River

The Little Schuylkill River starts below McAdoo and flows through Tamaqua and New Ringgold before joining the Schuylkill River at Port Clinton. Fish caught in the river include trout, smallmouth bass, perch, and catfish. The stretch below New Ringgold to Port Clinton is the best water for bass and catfish. Trout also show up here on occasion. The Little Schuylkill is stocked with trout by the Fish Commission where Locust Creek enters the river to its junction with Panther Creek in Tamaqua. The Little Schuylkill Conservation Club also stocks fish from its cooperative nursery, beginning at Locust Creek, downstream to New Ringgold. Best offerings in the river include minnows, worms, and spinners. Access is from Hecla downstream to Port Clinton. Care must be taken not to enter the Atlas Powder Company property near Reynolds.

Bear Creek

This stream flows for 8.2 miles along Route 895 and is stocked with brook trout for preseason and rainbows in season. The best time to fish is from opening day until early

The outlet of Locust Lake is a popular opening day and early season trout spot.



June. The top baits include worms, salmon eggs, and spinners. This stream is stocked from the Quarry east of Summit Station to just west of Auburn.

Deep Creek

The Fish Commission stocks 9.4 miles of this stream, which is in the Hegins Valley. Almost all this stream meanders through farmlands and it receives two stockings of brown and rainbow trout. Best time to fish is opening day to June. Good baits are spinners, minnows, and worms.

Access is available by the many roads crossing the creek from Route 25. The creek is stocked from below Barry Elementary School to Valley View. Almost all this stream is float-stocked by the Lavelle Fish and Game Club with help from local high schools. Lavelle Fish and Game also stocks Deep Creek from its cooperative nursery.

Little Catawissa Creek

This northern-most stocked stream in the county receives two stockings of brown and brook trout. This stream is located near Ringtown. The best time to fish is opening day to early June, and good baits to use are worms and minnows. Fish deep and slow early in the season because of cold water temperatures. The upper section from Reservoir Road into Columbia County is Class A wild trout water, and is not stocked.

Pumping Station Dam

This 9-acre impoundment near Brandonville is stocked with brook and rainbow trout. Fishing is at its best from opening day to June. Baits to use include spinners, salmon eggs, and worms. Come prepared for some tackle-busting trophy palomino and rainbow trout, which always seem to find their way here. Stocking takes place preseason and several times in season.



Lower Little Swatara Creek

Called Rock Creek by the local anglers, this stream flows parallel to Route 895 for more than 6 miles between Summit Station and Pine Grove. Stocked with brown and rainbow trout, this stream offers the angler some of the best trout fishing in the county. Due to the efforts of the Pine Grove Sportsmens Club, this waterway is open to public fishing for its entire stocked length. It receives preseason and inseason stockings, and the best times to fish are from opening day to June. Best baits are spinners, salmon eggs, and worms. Fishermen also catch pickerel and smallmouth bass. A good place to try is on Game Lands 160, which is about 3 miles east of Pine Grove on Route 895.

Lizzard Creek

This easily accessible stream flows from Schuylkill County to Carbon County along Route 895. It is stocked from just below Route 309 to the Carbon County line with rainbow and brown trout. The Fish Commission stocks both preseason and in season. The Sportsmens Rod and Gun Club also stocks from its cooperative nursery.

The best time to fish is opening day to the end of May, and good baits are small spinners and salmon eggs. Respect the landowners, and obey the "No fishing zone" signs.

Locust Lake

Located in Locust Lake State Park, this 56-acre lake receives brook, brown, and rainbow trout for one preseason, four inseason, and one winter stocking. The best fishing times are from opening day to June and then again in December to February when solid ice covers the lake. Fishermen catch some fish in the deeper water during the summer and fall months. The best baits to use are spinners, worms, mealworms, and salmon eggs. Boating is permitted with electric motors only.

The park has 282 campsites available from the second Friday of April to the third Sunday in October with many of these located on the lake shore. There is a camp store at the park with limited amounts of fishing tackle and bait for sale.

The lake can be reached from Route 209 at Middleport and from Route 54 in Barnesville. Follow the signs to the park.

Northumberland County by Ronald L. Hoffman

orthumberland County has a population of over 100,000 with the cities of Shamokin and Sunbury the major population centers. The county is mostly agricultural in nature, and the eastern end of the county is a major Pennsylvania coal producing area.

From a piscatorial viewpoint, Northumberland County would have to be considered primarily a warmwater, riverfishing area. It has over 56 miles of river system, with this mileage made up of the Susquehanna River North Branch, Susquehanna River West Branch, and the Susquehanna Main Branch. The trout fishery consists of the Little Shamokin Creek, Schwaben Creek, Roaring Creek South Branch, Mahantango Creek, and the Zerbe Rod & Gun Club Pond.

Little Shamokin Creek

Little Shamokin Creek is a tributary to Shamokin Creek. It meanders through farmland and woodlots along Route 890 between Sunbury and Trevorton. It receives brown trout and rainbow trout on a one-time preseason basis. April and May are the best months for fishing the Little Shamokin, and worms, minnows, and salmon eggs are the best producers. The stocking area runs from near the Route 61 bridge upstream to the Route 890 bridge where L.R. 49033 joins Route 890. This distance is approximately 8.8 miles.

Schwaben Creek

Schwaben Creek is a tributary to Mahanoy Creek. It parallels L.R. 49010 from the village of Red Cross to the village of Greenbrier. It receives both brown trout and rainbow trout on a preseason and inseason basis. Like most of the streams in Northumberland County, the Schwaben Creek is a seasonal fishery. The best months are April and May. Some good brown trout fishing can be had after dark. Worms, minnows, salmon eggs, and corn are the best baits. The stream is stocked over the entire reach listed above. The best water for fishing is on the lower end. The stocking distance is about 6.6 miles.

Mahantango Creek

Mahantango Creek is a tributary to the Main Branch of the Susquehanna River. It forms the border between Northumberland County and Dauphin County. It is stocked for a distance of 20.4 miles from the bridge below the village of Malta to the confluence with the Little Mahantango Creek in Schuylkill County. The best fishing for trout is during April and May, with trout taken

Northumberland County, try the Main, North, and West branches of the Susquehanna, in addition to Mahantango Creek. Schuylkill County's best largemouth bass action occurs at Auburn Dam, Sweet Arrow Lake, and Tuscarora Lake. orthumberland Mahanov Shenandoah amaqua Shamokin Trevorton Minersville 106 Of Wigsburg 1895 Drehersville Schuylkill Hav Spring Glan Tower City m Deturksville 443 Pine Grove

throughout the summer and fall. Nice smallmouth bass are a fairly common occurrence as are rock bass.

Mahantango has also produced some nice muskellunge, walleye, pickerel, and channel catfish. The Mahantango Creek is a fairly large stream flowing through farmlands at the base of Mahantango Mountain. Worms, minnows, salmon eggs, spinners, spoons, and plugs all work well. It is particularly important on a stream of this size to match the bait or lure to the species you are after.

Thanks to the Fiddlers Run Sportsmen Club, float stocking is used throughout the stocking area. This method spreads the trout stocked over a more complete area and greatly increases the fishing quality and opportunities on this stream.

South Branch of Roaring Creek

The South Branch of Roaring Creek sits on the eastern boundary of Northumberland County and Columbia County. It receives both preseason and inseason stockings. The stocking area is approximately 3 miles in length and runs from the confluence of Roaring Creek and the South Branch of Roaring Creek to above Knoebel's Grove Amusement Park.

April, May and June are the best months. Worms, minnows, salmon eggs, corn, and spinners all work very well. The upper end of this stream is managed by the Commission as a Class A wild trout fishery.

Zerbe Rod & Gun Club Pond

For excellent smallmouth bass action in

Zerbe Pond is a 2-acre waterway located in "Doodle-Bug Park" in Trevorton. The pond and property are owned by the Zerbe Township Rod & Gun Club, and through its cooperation and public-minded spirit, it has provided another opportunity for trout fishing in Northumberland County. Among the preseason stocked fish were a number of trophy-sized palomino rainbow trout.

Trout season, and in particular the opening day, Zerbe Pond takes on an almost carnival atmosphere. Young, old, experienced, and inexperienced alike all compete for the rainbows. Of course, all forms and types of equipment and baits are used, and most enjoy some degree of success. To get to the pond take Route 225 to Trevorton. At the eastern end of town, turn toward the bottom of the valley, cross the railroad tracks, and the pond will be in front of you.

Chillisquaque Creek

The Chillisquaque is a warmwater stream that traverses the county between the boroughs of Northumberland and Milton. It flows through the county for about 7 miles. Though not stocked, it is a tributary of the West Branch of the Susquehanna River and as such contains the same species you would find in the river. It receives its water supply from the PP&L power generating facility in Montour County. The spring of the year is the best fishing and rock bass are the species most frequently caught.

Access to the Chillisquaque can be gained from Route 405 near its mouth, Route 45 at the eastern edge of the county, and from Route 642 just east of the town of Pottsgrove.

The Susquehanna River

The North Branch and the West Branch of the Susquehanna River meet in Northumberland County. The West Branch and the Main Branch serve as Northumberland County's western-most border with Union, Snyder, and Juniata counties.

West Branch Susquehanna River

The West Branch has its origins in Clearfield County, flowing eastward forming parts of the Centre and Clinton counties border and into Lycoming County. From Lycoming County, it enters Northumberland County several miles above Watsontown. The West Branch serves as part of Northumberland County's western border with Union County.

The West Branch suffered greatly in the past from mine discharges to the west. However, it is making and has made an admirable comeback. Fishing for all our more common warmwater species can be rated as very good in the Northumberland County section of this branch.

As soon as the ice is off in the spring, excellent sucker fishing can be had at almost any location you choose. Small garden worms are the ticket to success. Smallmouth bass and walleye fishing in the fall is popular with some nice fish caught. Plugs, spinners, minnows, and worms all work very well.

The top spots are from the confluence of the West and North branches at Northumberland Borough upstream to the Winfield area, and from the Borough of Montgomery in Lycoming County downstream to the old ordinance dam area. The real star of this show has to be the muskellunge. Muskellunge are caught with good frequency along this entire length of river. Fish big plugs, spoons, or large live baits. These are big fish and as such appropriate equipment is recommended.

In September 1983, the West Branch received muskellunge fry, and in April 1984, the Fish Commission stocked walleye fry between the confluence of the North and West branches and the Northumberland/Lycoming County line.

This stretch of river is about 23 miles long and can be described as quite shallow with various pools and riffles. Access to the river is adequate. There is a Fish Commission access area at Montgomery. From there traveling downstream, a boat launch is available at the Watsontown bridge, another is located at the southern end of Watsontown, and another at the Route 11 bridge in Northumberland.

There are numerous locations along this stretch where small cartop boats can be launched. It should be noted that with the exception of the area around the Route 11 bridge, which is commonly known as Lake Augusta, and several other small pools, this entire length of river is only suitable to very small boats. If you plan to use a motor-powered boat in this area, extra shear pins are a must.

North Branch of the Susquehanna River

The North Branch of the Susquehanna River has its origin in New York state. Before entering Northumberland

County about 3 miles west of the City of Danville, it flows through Bradford County, Wyoming County, Lackawanna County, Luzerne County, Columbia County, and Montour County. It is the larger of the two branches. Its length in Northumberland County is just over 10 miles.

Most of the facilities for launching a boat are found in the Sunbury/Northumberland Borough areas. Parkers island, whose southern end makes up Shikellamy State Park, boasts excellent boat launch facilities. At Hanover Street in Northumberland Borough, there is a launching ramp, and at "Norie Point" in Northumberland Borough there is another. The North Branch is certainly on par with the West Branch in opportunities to catch fish. In September 1981, muskellunge fingerlings were stocked by the Commission in this stretch, and again in September 1984, more were stocked. Although the walleye fishing has not been in recent years what it was in the past, the smallmouth bass fishing is very good. Channel catfish over 20 inches are common here, and rock bass and crappie fishing in the spring is excellent.

Main Branch of the Susquehanna River

This stretch of the Susquehanna River in Northumberland County runs from the confluence of the West Branch and the North Branch of the Susquehanna River at Sunbury downstream to the Northumberland/Dauphin County line. This distance is approximately 23 miles. This part of the Susquehanna River forms part of Northumberland County's western border with Snyder County. Access to this section of the Susquehanna is primarily on the Snyder County shoreline along routes 11 and 15.

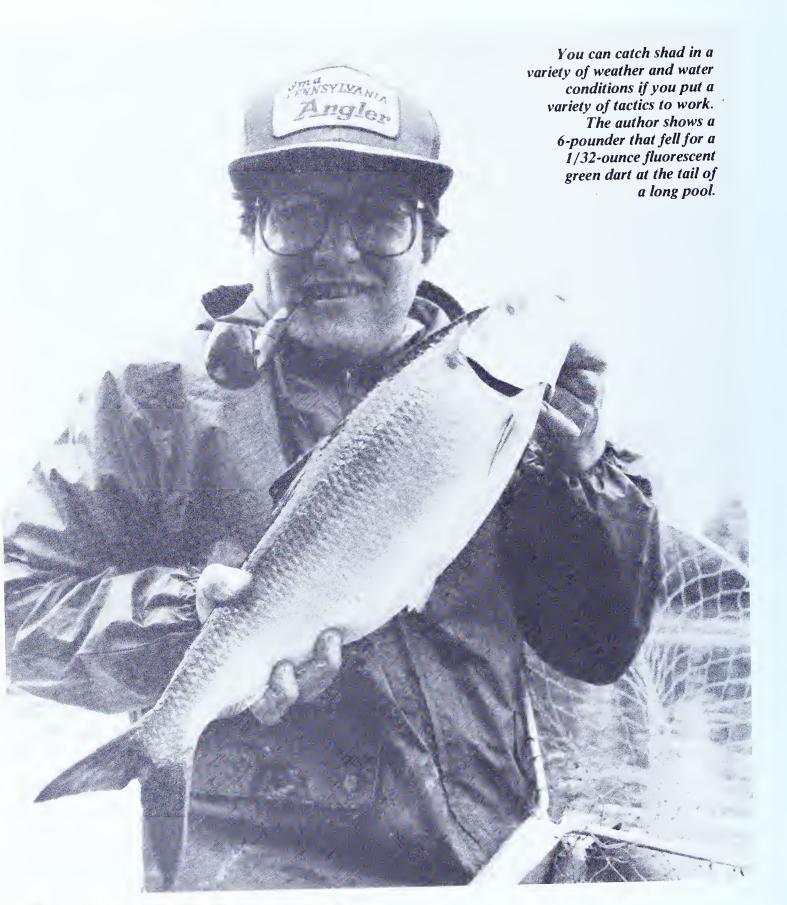
However, numerous access points can be found on the Northumberland County side from Route 147. At the southern end of the City of Sunbury along Route 147 is the Sunbury Access Area. This access area was constructed by the Fish Commission in 1982 and 1983 and provides excellent access to the river between the Sunbury Inflatable Dam and a low-head dam approximately 1½ miles downstream.

This is an excellent fishery, and well-known for its walleye and smallmouth bass fishing. Spring and fall are the best times with the early morning hours the most productive. All baits and lures work well here, but the real killers are crayfish, minnows, and twister-type jigs in yellow.

In September 1984, muskellunge fingerlings were stocked in this stretch. This area of the river abounds with islands. It has many deep pools and channels with sudden dropoffs and ledges. In the spring, aside from the excellent walleye and smallmouth bass fishing, the action for suckers and channel catfish continues round the clock. The most effective baits and methods are minnows and worms for the channel catfish and small garden worms for the suckers.

Although most of Pennsylvania's gamefish species are available in very good numbers in this section, the real star of this show is the smallmouth bass. It is present here in excellent numbers, and the entire area lends itself ideally to this species.

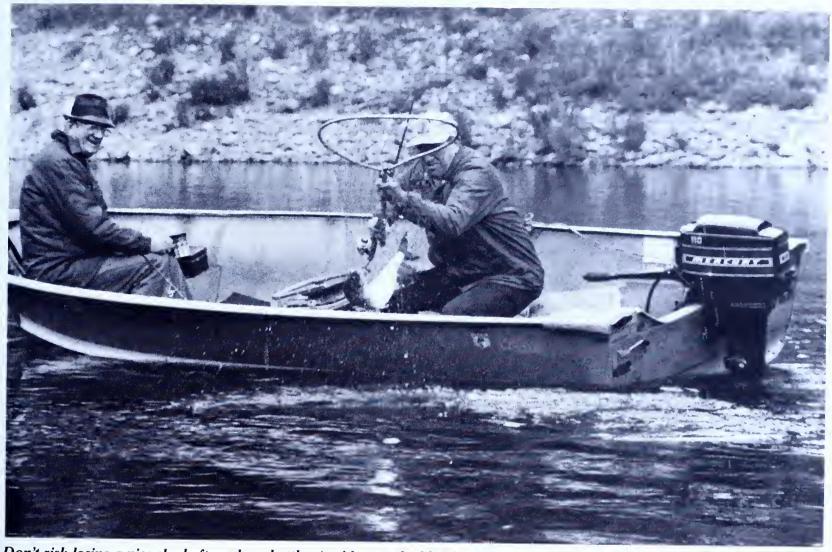
Gary L. Slutter is waterways conservation officer for Schuylkill County. Ronald L. Hoffman is the waterways conservation officer for Northumberland County.



Shad-Taking Techniques

by Dave Wonderlich photos by the author

sn't that just the way it usually happens? You pursue a particular type of fish for years with more than respectable results, then a season comes along that makes you feel completely inept. Trout anglers are



Don't risk losing a nice shad after a long battle. A wide-mouthed landing net is a must for successful shad fishing.

used to this dilemma of on-again offagain action to the point that it has become a part of the challenge and mystique of their preoccupation.

Shad fishermen, on the other hand, are used to fairly constant action in typical spring conditions for the time of the season when the run hits their area. Trout are afforded their legend because of their seeming intelligence; shad are expected to be caught the same way in the same places year after year.

When seasons roll around that throw poor conditions at the shad angler, there is no need to be defeated by something that appears to be beyond the fisherman's control. Shad are just as smart as any snobby trout, and the water and weather conditions are no more barriers to catching the silver anadromous fighter than they are to catching trout.

The 1985 shad run provided the most extreme case of uncooperative fish in recent memory. The Delaware River water levels were lower than low, and the run seemed to be in an area and back out before anything

happened. Anglers were still in the same areas with the same darts hoping for a strike.

One Sunday early in the season, the key became clear to me after a lesson by my children.

My family and I were anchored in a favorite shad pool north of Stroudsburg. It was a bright day with overcast sky and calm, low water. David, my eldest son, 8 years old at the time, and I cast far out and downstream with large red and white darts. John, my younger son who was then five, cast about half as far with a lighter dart, and Elizabeth, my 2½-year-old daughter, did well in casting a light dart about 15 feet behind the motor with her Snoopy rod. We were looking toward the large flotilla of anglers around us when... "Daddy, Daddy!"

You guessed it. The Snoopy gear was bent double and Elizabeth was reeling for all she was worth. David and I reeled in, but before John got his dart to the boat he was also fastened to a good fish. Elizabeth's little rod brought the buck in quickly, and we netted John's roe about 10 minutes

later. After two hours, David and I still hadn't caught a shad; while John, Elizabeth, and my wife, Jetty, had the stringer almost full.

Of course it wasn't my fishing ability or David's that caused our fishlessness, nor was it the superior craftsmanship of the Snoopy rod. It was a matter of where the little rod put the small dart, and how it made the imitation work in the water.

A lot of valuable lessons were learned last season (in addition to realizing that a number of extra sheer pins should always be carried for the outboard motor) by those who tried varying the size and types of imitations. There were still periods during each day when conversation among friends was the only action, but looking at the low water and uncooperative fish as a challenge of skill rather than luck made the season one of the most interesting ever.

The methods used in the varying water levels last year provide a foundation for shad-taking techniques no matter what the conditions, as long as the water is fishable. The variations

are line size, dart size, use of lures, casting distance, and best fishing locations.

Line

Six-pound monofilament is the accepted standard weight for shad fishing. In heavier water, or offcolored conditions, 8-pound can be a plus, although extra weight may be needed because the larger diameter line keeps the lure riding higher in the water. A lighter test line is best for low water and very clear conditions. If you use your 6-pound or 8-pound line and aren't getting a strike, slip on a spool of 4-pound test and see if the smaller line with its diminished visibility helps. Last year, I went all the way down to 2-pound test. It takes a little longer and demands more patience, but good shad can be landed on light line.

Dart size

Dart size is probably the most important variable in your bag of shad fishing tricks. When the water is deep and swift, as it is in a usual spring, eighth-ounce darts work well. If you aren't getting hits, try a couple of splitshot 1½ feet above the dart. When the water is lower and slower and probably clear, 1/16-ounce and 1/32-ounce darts not only suspend themselves well, but give good life-like action.

Remember that in low, slow water the shad don't have to hug the bottom to conserve energy for the run. In drought conditions the shad still like deeper channels, but they can be found closer to the surface. This is true especially in conjunction with pools. As the fish travel through pools, or hold in swifter pool areas in times of low water, shad will take a small dart swimming just below the surface.

The smaller dart versions are also great after the major run has passed and it is time to fish the pool flats for spawners. When the fish come in early in the evening, they cruise just under the surface. Smaller darts 6 inches to a foot below the surface seem to intercept them and draw heavy strikes. If the water is higher, and the fish travel deeper before getting to the edges of the slower pool water, use larger darts to keep the imitation working at the proper depth.

The dart size together with line diameter and water speed determine where the lure rides. For a general key to success, try the principle of high and swift water, larger darts and placement just above the bottom; low and slow water, small darts presented a foot under the surface. Choose the line according to water clarity, and then vary the dart according to clarity and current.

Different offering

One very calm evening, Angler editor Art Michaels and I were fishing a glassy pool where you could see every stone on the bottom. Even the 1/32-ounce darts seemed big. Art switched to a No. 2 Flicker Spinner and shortly the calm ended. The small gold spinner hummed and vibrated. The tip of Art's rod quivered rhythmically. You could tell that when the lure picked up river debris, the rod tip stopped its cadence and became dead.

For the next hour, Art was always busy playing a shad fastened securely to either a Flicker Spinner or Shad King—two of the best low-water shad lures. Sizes 2 and 3 seem to be top producers. I finally switched to one of the little golds and started picking up fish.

Lure depth

Don't forget that the amount of line out on the cast helps determine the depth at which the lure rides. More line allows a deeper ride, and less line a shallower ride. A heavier dart can be worked closer to the surface if it is on a short line; I've caught plenty of shad on a quarter-ounce dart early in May a very short cast behind the motor.

If you slowly reel in the dart, it will also ride higher in the water. I like to give the rod occasional twitches which seem to precipitate strikes. Slow reeling (very slow) with small intermittent twitches seem to drive shad into striking. Try it.

Locations

Of course, fishing locations are important to success. When you first begin, it is almost impossible to know where river bottom channels are located. You'll want to fish the channels because this is where the shad tend to run; they hold in the deeper portions of the slower water. Gener-

ally, the line of boats arching along the river is a good indication of the channel. The "old hands" can follow the main channel throughout miles of their favorite haunts, so watch these people and where they are anchored. There is plenty of room, but remember to use good boating manners and don't crowd someone by coming up close below him, where he was working his darts downstream.

In large pool areas where the current is spread out over a deep area, one narrow channel may not be defined and boats can be dotted throughout the width of the river.

Riffle areas that have a deep run which filters into a broad slick are prime water. Anchor in the deep run and cast the darts quartered downstream. Vary dart size according to the speed and depth of the current, and then hang on! Earlier in the season and until the main run has gone through, these areas are good throughout the whole day. Later, after the main run is over, work these areas until about 5:30 p.m., then head for the pool. Shad will come to the shallows from the deeper water, and you will be at the edge of the current to intercept them. It is tricky to catch them at this time, but varying the methods and finding that evening's best technique can bring fishing without compare.

Take every opportunity to fish with other shad anglers; watching and fishing with them can provide valuable insight. Talk to other anglers at the boat ramp and ask questions. Most fishermen are only too glad to share their wisdom, if not their favorite spots. Every time Michaels and I go out on the Delaware with Floyd Kellogg, one of the best shad fishermen around, the "captain" comes up with something new that fools the shad.

Approach shad as you would trout, with an open mind and plenty of respect. Have your tackle box well-supplied with different sized darts, and bring along an extra spool of lighter line. Vary the depth and distance of your presentation, and try reading the water to determine where the shad will be.

Lucking into shad is one thing, but adapting to the widely varying conditions you could encounter and fishing accordingly can help you greatly increase your success.



"Do-Nothing" for more Crappies



by Jim Gronaw

strong forearm snap launched the 1/16-ounce jig just beyond the area where I knew submerged brush would attract crappies. Immediately I flipped the bail and pinched the fine 4-pound mono with my thumb and forefinger. By watching my rod tip and feeling the line, I detected a slight heaviness to the jig. A quick wrist snap resulted in a pound-sized crappie doing battle with my graphite stick, and it was a welcomed addition to my growing stringer of slabs.

I wasn't doing anything special to entice those crappies. Actually, I was doing nothing to impart action to the jig. And it's this "do-nothing" approach to crappies that can help you make better catches, year-round, in a variety of crappie fishing situations.

photos of the deale

As its name implies, the "donothing" jigging technique means just that—don't work the lure; let it work itself. The real tactic is to maintain immediate contact with your jig—as it falls or if it is suspended from a bobber. This requires the use of quality high-visibility monofilament lines of 4-pound test or 6-pound test. Don't waste your time with cheap, springy monos. You'll never be able to detect soft-striking slabs. Also, sensitive graphite and boron rods put the odds in your favor on strike sensitivity.

Two basic tactics keep you in touch. One is simply to keep a tight line as the lure falls through submerged cover. Gently hold the line with your thumb and forefinger and keep a sharp eye on your rod tip for any deviation during the fall of the jig. Your lure may feel just a tad heavy, so set the hook. It could be a crappie that gently took it on the drop. Set the hook! Of course, the customary "bump" of a crappie may be the normal strike routine, and it's easier to detect.

The other tight-line approach is to use a sensitive bobber. Although there is a tight line between your jig and bobber, it's the line between your bobber and rod tip that's important. Keep your line tight. You may have to utilize a slow retrieve to accomplish this. For most situations, I prefer a 2-inch wood bob (painted fluorescent orange) for suspending jigs down to 4 feet. It casts like a bullet and goes down easily on the strike. For anything deeper, I use the free-falling technique.

Jigs and trailers

To utilize the do-nothing approach for crappies, you need a good supply of 1/32-ounce and 1/16-ounce jig heads and a variety of plastic twister tails and tube tails. Colors should be black, white, smoke, lime green, chartreuse, and hot pink.

When used with 6-pound test, jigs with wire hooks can often be straightened from snags and promptly reshaped for action. With 4-pound test, you'll most likely lose many jigs that become snagged.

Although the traditional one-inch to two-inch plastic twistertails are fine for most situations, there are times when tubetails outfish them. The tubes are 1½-inch, hollow plastic trailers with small "legs" cut in the back of the tube. When used with the jig heads, they create an effective lure that sinks slowly and provides tantalizing quivers on the fall. Simply thread the tube on your hook the same as you would a twister and let it do the work for you.

To obtain the proper rate of fall on the jig, it may be necessary to add splitshot to your line. Sometimes, crappies want a fast drop, and you can use several BB-sized shots pinched 16 inches ahead of your jig. Then again, the fish may be in a lethargic mood and prefer a very slow drop. For these situations, only one or two BB-sized shots should be added, and sometimes none at all. Each crappie fishing excursion dictates a preferred rate of fall, so some experimentation will be needed to pinpoint that rate.

Color rotation and scent

Sometimes you'll hit on a color combo that knocks the crappies dead for an hour, and then the action dies off completely. It pays to keep a variety of colors on hand. My three favorite colors for crappies are white, chartreuse, and black, and I usually rotate my twistertails in that order. If white doesn't bring a strike or a fish in 20 minutes, I switch to chartreuse. After 20 minutes (if no strikes), I'll go to black. In this way, I can fish three distinct colors in any hour and pattern my fishing accordingly. Of course, when one color is producing well, I

stick with it. If the fishing is slow, don't be afraid to go to colors like hot pink or electric blue metalflake. Once in a while, an off-color produces exceptionally well.

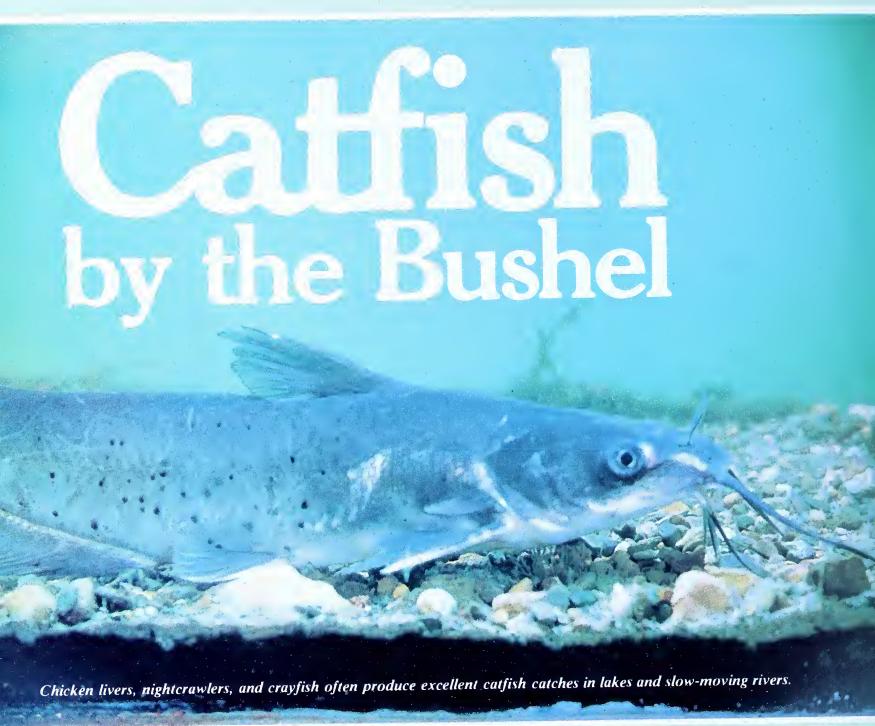
Not everybody uses today's commercial scents for their fishing. But 1 believe that with picky, light-striking slabs, a scent attractor can put the odds again in your favor. It doesn't necessarily attract the crappies, but serves primarily as a cover-up to mask the odor of gasoline, oil, or that sandwich you had for lunch.

l prefer the Fish Formula ll and Fish Formula Shad for crappie jigs. The Berkley Panfish Scent is another excellent cover-up.

Keep in mind that the do-nothing crappie jigging tactic occasionally coughs up a bass or walleye during your angling efforts. This dynamite panfishing technique can be applied to other fish as well, with excellent results. The do-nothing approach should be in your arsenal this season because, quite simply, it works!



Jig heads in 1/16-ounce and 1/32-ounce sizes with a variety of tube tails and plastic action tails are good crappie offerings. Try trailers in black, white, smoke, lime green, chartreuse, and hot pink.



by Gary Diamond

very good fishing area of the United States has its "ugh" fish. These are what's better known as "undesirable" species—the ones that usually get thrown back because they won't win a beauty contest among piscatorial animals. However, anglers fishing the waters of the Keystone State are fortunate in that we consider those same species to be desirable. Thousands of Pennsylvania fishermen spend millions of hours enjoying these fish.

Catfish, in particular, are among those "unwanted" species. Even in our own state, some trout and bass purists claim that the fish are nothing short of disgusting—but these same uninformed individuals have likely never hooked up

with a big channel cat in the raging waters of the Susquehanna. Otherwise, they would change their tune and sing the praises of what can be considered one of the best-tasting fish that inhabits our area.

Many myths have been extolled pertaining to catfish. Some unknowing anglers think they don't put up much of a fight, while others emphatically state that the species is unfit for human consumption because they feed on the bottom. Both statements are unequivocally false. However, this too has its better virtues—it leaves more fish for those of us who ardently seek this whiskered denizen of Pennsylvania's rivers and lakes.

Catching big catfish isn't as easy as many anglers believe. In fact, only a small dedicated group of anglers can boast of having caught channel cats of over 10 pounds. The reasons behind their success are complex, but once you've mastered the art of enticing one of these brutes to take your offering, you'll be among the elite group who comes home with a cooler full of fillets instead of talking about the ones that got away.

Feeding habits

First, let's dispel the myth that catfish feed exclusively on the bottom. Sure, they eat bottom-dwelling animals such as crayfish, but they also have a keen appetite for small bluegills, minnows, worms, and other baitfish. If their diet sounds somewhat familiar, that's because it mimics the menu of every other gamefish swimming in our waters. Largemouth and smallmouth bass, trout, walleye, and others have the same dietary preference. The one thing catfish possess, however, is a keen sense of smell that allows them to locate food at far greater distances than other species. This sense, of course, works to the advantage of the ardent catfish angler when the correct bait is used.

Bait selection

Although you can catch catfish on most live and preserved baits, the larger fish feed mainly on large baits. Big shiners are among the top producers, followed by small bluegills and cut bait. These are most effective when fished in the fast waters at the base of dams. Unfortunately, the water conditions are not always just right, and in some instances, traveling to the dam might be a long trip if you just want to fish a few hours after work. This problem is solved by heading to the nearest lake and fishing in relatively deep water. Chicken livers, nightcrawlers, and live crayfish often produce excellent catches of huge catfish in slow-moving rivers and lakes. The trick is to use a bait large enough to entice the big fish while keeping the little guys off the hook. One angler who fishes Conowingo Pool as if it were some sort of religion places chicken entrails in a burlap bag and sinks it where he intends to fish. The bag is marked with a float attached to nylon rope and left for a day or two.

Usually, within 24 hours, the bleach bottle float is erratically bobbing as the catfish try to get at the contents of the bag below. Now it's merely a matter of casting your bait next to the flat, and within seconds you're hooked up with a struggling, whiskered adversary.

When the fishing day ends, be sure to remove the chum bag so that it doesn't become a navigation hazard. In addition, using a chum bag attached to a rope is legal, but do not use cans of food that can't be retrieved. This is littering, which is illegal.

Tackle requirements

The area you're fishing and the water conditions determine what type of tackle you need to be successful. In most instances, heavy spinning gear or a level-wind boat rig is best for fishing the base of dams. The strong currents dictate using reasonably heavy sinkers to hold bottom. Most veteran catfish anglers rig up with a three-way swivel attached to the line, 10 feet of monofilament leader testing a few pounds less

than their line, and a drop sinker of sufficient weight to hold bottom.

Hook size ranges from 2/0 to 5/0, depending on the size of the bait used. The areas beneath the base of the dams are protected from erosion by covering the bottom of the river with large boulders. This means you'll lose lots of rigs. To save your line and hopefully the fish at the end, use lightweight monofilament to attach your drop sinker. If you happen to get snagged, the only item you'll lose is the sinker.

Fishing tactics

In most instances, fishing for catfish is simply a matter of casting your bait out and waiting until a hungry cattie comes along. However, when you're fishing from catwalks at the base of spillways, you'll have to impart some action to your minnow or baitfish to be successful. Dam anglers carefully work their baits beyond the end of the boiling water. Then, with a slow jigging action, they move their offerings back and forth to simulate an injured baitfish. If results are not achieved within 10 minutes, the process is repeated using various weights to change depths and position.

Once you hook up with a big cattie, you'll likely find more in the same spot. The action usually continues during the entire day and well into the night.

Slow-moving rivers and larger lakes are places where patience is required to catch big catfish. Because the currents don't carry the scent of the baits rapidly, it will take the fish somewhat longer to find your offering. However, when the action begins, it's usually non-stop until you run out of bait.

Cleaning and cooking

With the exception of the spikes located on the dorsal and pectoral fins, catfish have the same bone structure as do most game species, thus dispelling the myth that these fish are too boney to eat. The secret to cleaning catfish is first to remove the spikes with a pair of wire cutters. Then, with the skin still in place, fillet the cattie as you normally would any other fish. Once the fillets have been removed, place the fillet skin-side down on a board and gently remove the skin with the knife.

There's nothing better tasting than freshly caught catfish. They can be prepared in a variety of methods, but most anglers prefer them dipped in a corn meal batter and pan fried in vegetable oil.

I recently had the opportunity to taste smoked catfish fillets and found them to be outstanding. The brine solution consists of two quarts of water, one-half cup of non-iodized salt, one cup of brown sugar, one teaspoon each of lemon extract, onion powder, and garlic powder, and two tablespoons of Old Bay Seafood Seasoning.

After soaking the fillets in the solution overnight, bake them for approximately 25 minutes at 325 degrees and then smoke them for three hours with hickory chips. The smoked fish keeps in the refrigerator for periods of up to three weeks and in the freezer for up to six months.

Now, extend your fishing season considerably by heading for a Keystone State catfish hotspot and filling a bushel basket with tough-fighting, fine-tasting catfish.

Pennsylvania's Best Catfish Action

Here is where you will find above average to excellent action with channel catfish and flathead catfish throughout Pennsylvania.

- Pymatuning Lake (Crawford County)
- Allegheny River (Forest, Allegheny counties)
- Ohio River (Allegheny County)
- Lake Arthur (Butler County)
- Monongahela River (Greene County)
- Ten Mile Creek (Greene County)
- Susquehanna River (Cumberland, Dauphin, Perry, York, and Lancaster counties)
- Mahantango Creek (Dauphin, Northumberland counties)
- Juniata River (Perry County)
- Lake Marburg (York County)
- North Branch Susquehanna River (Columbia, Lackawanna, and Montour counties)
- Lackawanna Lake (Lackawanna County)
- Newton Lake (Lackawanna County)
- Delaware River (Monroe, Bucks, Philadelphia counties)
- Chester-Octoraro Lake (Chester County)
- Schuylkill River (Philadelphia County)



ANGLERS CURRENTS

Angler Contributor Wins Award

C. Boyd Pfeiffer, president of the Pennsylvania Outdoor Writers Association and long-time Angler contributor, won the Pete Greer Memorial Award for the best single photo, as part of the Mason-Dixon Outdoor Writers Association 1985 annual writing and photography awards program. The winning photo was the July 1985 cover of *Pennsylvania Angler*, which shows an early morning scene of an angler trying his luck on the Juniata River near Thompsontown (Juniata County).

Anglers Notebook & Saw Everett

Instead of using red and white bobbers, try orange and white ones. You may find that they're easier to see in the water.

Check your anchor line for wear. If it needs to be replaced, nylon line is a good choice because it stretches, and can absorb the shocks that anchoring sometimes involves.

Loosen the drag on your spinning reel spools after each fishing trip. In this way, the drag will last much longer and work better because the parts become worn more slowly than if you kept a tight drag setting all the time.

Try fishing dry flies downstream by casting and then paying out line. This tactic lets you cover water you wouldn't ordinarily work with a dry fly, and the fish could easily be fooled there if they're not used to seeing such an offering.

Lock your trailer tongue to the tow vehicle hitch ball. In this way, stealing the trailer while you're on the water is difficult.

Which color combinations are best for shad darts? Red and white are traditional winning combos, but many shad are taken each year on fluorescent green and orange darts. If you catch nothing in one spot in about 20 minutes, try a different color and a different size dart.

When you wade in cold, deep, swift water, always use a staff. In addition, loosen your wading belt to let some air out, and then tighten it again. This tactic gives you a balance between holding some air in your waders, but not so much air that the extra buoyancy easily causes you to lose your footing.

Fishing the Delaware for shad in 12-foot to 14-foot boats is common, but be sure to heed a vital safety tenet: Don't stand up in the boat. Small boats are unstable, and many accidents occur because victims initially stood up in their boats before falling overboard. Landing a shad is exciting sport, but to be on the safe side, stay seated!

The best insect repellents on the market are those that contain the most DEET, the active ingredient that does the repelling.

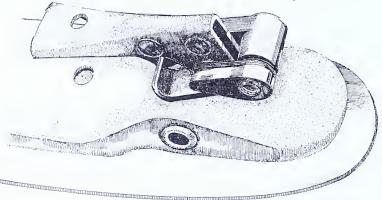


illustration by Rose Boegli

Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and

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PENNSYLVANIA FISH COMMISSION **Division of Fisheries**

STATE-FEDERAL TROUT STOCKING PROGRAM INSEASON - 1986

TROUT SCHEDULED TO BE STOCKED

PENNSYLVANIA FISH COMMISSION STOCKING PROGRAM:

(State Hatcheries) — Nine (9) Hatcheries and 43 Distribution Units

	Number of Areas	Number of Miles	Number of Acres	Total Trout Scheduled
Streams Lakes	674 92	4,304.40 —	20,585.80 4,734.20	2,093,600 540,000
	766	4,304.40	25,320.00	2,633,600

FEDERAL STOCKING PROGRAM:

Two (2) Hatcheries and three Distribution Units

(Allegheny Hatchery)

Streams Lakes	11 —	46.80 —	143.80 —	21,000
	11	46.80	143.80	21,000
(Lamar H	latchery)			
Streams Lakes	3 4	3.50	30.80 967.60	11,550 16,250
	7	3.50	998.60	27,800

TOTALS FOR STATE AND FEDERAL PROGRAMS:

Eleven (11) Hatcheries and 46 Distribution Units

Streams Lakes	688 96	4,354.70 —	20,760.40 5,702.00	2,126,150 556,250
	784	4,354.70	26,462.40	2,682,400*
	1 1 4 400/ 1			

*Species: Approximately 19% brook trout; 37% brown trout; 44% rainbow trout

COOPERATIVE NURSERY BRANCH (Estimate)

750,000

GRAND TOTAL OF ALL TROUT SCHEDULED

(State, Federal, Cooperative Nursery) 3,432,400

Wiconisco Creek Watershed Association **Receives Award**

The Wiconisco Creek Watershed Association (WCWA) was recently honored as the "Outstanding Watershed of the Year" in Pennsylvania by the Pennsylvania Association of Conservation District Directors during the awards banquet at its 38th Joint Annual Conference, held in northern Dauphin and western Schuvlkill counties.

Organized in 1983, WCWA is a citizens group consisting of municipal officials and concerned citizens who have been working hard to bring back a sense of pride and appreciation of the natural resources in northern Dauphin and western Schuvlkill counties. In past decades, the upper basin of the Wiconisco Creek Watershed was plagued with acid mine drainage, abandoned deep and surface mines, cropfalls, and coal siltladen tributaries as well as the main channel of the stream. Other natural resources related problems throughout the watershed include: raw sewage. soil erosion, loss of wildlife habitat, and deteriorated water quality.

WCWA has repeatedly demonstrated that something can be done and will be done to change the deteriorated natural resource conditions that presently exist.

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"Notes from the Streams"

Safety stories

It was Labor Day weekend and DWCO Chuck Allih and I were preparing the boat to go on what would be a busy patrol. We were still at the dock when we heard a man shouting from a houseboat coming up river, "Hey, Coast Guard, there's a boat down river sinking!" When asked why they didn't help out, they replied, "It's under big trees and we can't get to them." We took off immediately with the blue light flashing and the siren wailing. About a quartermile downriver we saw a man standing in the water behind the boat trying to hold up the engine. Everything that could float was floating! Cushions, vests, eight-track tapes, picnic lunch, you name it. A woman was sitting on the bow screaming, "Do something, do something!" I inquired, "What would you like us to do?" She hollered. "You're the Coast Guard, do something!" We tossed her a PFD and threw a line over a tree limb to tie the boat off. After pumping the water out, we gathered up everything we could and towed the boat ashore. While we were loading the boat on the trailer, the man kept repeating how dumb he was for forgetting to put the plug in! One thing for sure, you never realize how much stuff you have onboard your boat until you see it floating around you.

On another patrol down the Beaver River, we saw a sleek-looking Criscraft with four persons onboard. A man, a woman, and two teenaged girls in bathing suits. The boat registration number was neatly displayed in good contrasting color with the validation decal properly placed. The two girls smiled and flashed us a peace sign. No reason to stop this boat, I thought, not until an hour later on the Ohio River when the boat was going full throttle and jumping huge breakers that were rolling off a tow barge. The girls were perched very dangerously on the transom of the boat. Out of fear for their immediate safety, I turned on the blue light and hit the siren switch. The cruiser came to a quick stop. Once alongside, I informed the operator why he was stopped and asked for his registration card. He replied, "I don't have it with me." Proceeding with the inspection, lasked to hear the horn and see his running lights. To this request, he answered, "They're not hooked up." I said, "You have an inboard engine—may I see your fire extinguisher?" He explained, "It's back in the car." On completing the boarding report, I said, "Sir, you're in violation of five boating regulations and I am at a loss to decide which one to cite you for." The man said, "How about the cheapest one!" I decided the danger he placed the girls in was the worst and not necessarily the cheapest!—Don Parrish, waterways conservation officer, McKean County

Pond poachers

In Union County, a theft of about 400 trout from a private pond was reported. An investigation was initiated, and through information received from various sources and with assistance of the local police, it was determined that three suspects were likely involved. When questioned, the individuals admitted their guilt and offered to make complete restitution if no charges were filed by the property owner. The property owner agreed. l wonder if these individuals realize just how much of a break they received. They could have been charged with theft and trespassing.—Terry F. Bowersox, deputy waterways conservation officer, Union and Snyder counties

Anglers surveyed

Last year, at the Allentown and King of Prussia sports expos, we surveyed licensed anglers. Readers might be interested in some of the results.

Anglers were asked to indicate whether or not they had caught a legal-sized purebred or tiger musky in southeast or southcentral Pennsylvania. At both expos, 20 percent indicated that they had made such a catch, and 80 percent said they had never caught a musky in those two areas. On another point, anglers were asked to indicate yes or no on this idea: I favor a higher size limit on bass than the present 12-inch size limit if it means that I'll catch larger bass but keep fewer bass from Pennsylvania lakes. At both expos, 69 percent said yes, 31 percent said no.

Anglers were also asked their fishing preferences. At both shows, the three most sought-after species in southeastern and southcentral Pennsylvania were, in order, trout, bass (largemouth and smallmouth), and crappies.—Chuck Emery, fisheries technician, Area 6.

Find me a bargain

Last year while on coho patrol at Lake Erie, WCO Tom Kamerzel, two deputies, and I came across a group of four party-oriented out-of-state college students. After leaving the "banks" of Walnut Creek strewn with beer cans



Fish habitat

Last January, some 25 people got together at Justus Lake, Venango County, to cut, build, and anchor 25 fish habitat structures on the west shore of the lake. These structures provide cover for gamefish and baitfish, spawning areas for fish, and desirable habitat for aquatic insects. Because of the food and cover provided by the structures, gamefish congregate near them, making the fish more accessible to Justus Lake's anglers.

Personnel included here are Fish Commission Law Enforcement Division and Fisheries Division staff, Two Mile Run County Park staff, and area sportsmen.—Robert L. Steiner, waterways conservation officer, Venango

County

DWCO Joe Waiter

and litter, we moved in on them. After explaining that littering is against the law in Pennsylvania, they agreed to pay their fines. They pooled their money, but came up a little short of cash, and they tried desperately to think of another way of payment. The leader of the group pulled out his wallet, and after fumbling around with his credit cards, looked at WCO Kamerzel and asked, "Will you accept Visa or MasterCard? — Paula Dubbs, Volunteer 1&E Corps

Bass or walleye?

I was patrolling Hereford Manor Lakes on the opening day of trout season last year when DWCO McMillan called me on the radio and asked me to meet him on the opposite side of the lake. DWCO McMillan was with a sportsman who saw another fisherman catch a largemouth bass and place it in his car trunk. The sportsman pointed out the fisherman and the car. DWCO Raymer and I approached the fisherman and asked him to open his trunk. He said that there was nothing in the trunk and then opened it. A rolled up blanket flopped around the trunk. There was an 18-inch largemouth bass in the blanket. I informed the man that I was going to cite him for possessing a bass out of season, and he told me that l was wrong, that the fish was a walleye, and that he had caught the walleye before. I told him that walleye were also out of season, and because both species were out of season, I would cite him for whatever fish he had. We then settled

for bass out of season.—Greg Jacobs, waterways conservation officer, Beaver County

This maneuver's for you

Annual CPR training is a requirement for all Fish Commission law enforcement officers. At a recent CPR certification session, our instructor was enthusiastically describing the training we were about to receive. He was doing okay until he tried to describe the Heimlich Maneuver, which is used for choking victims. He was having considerable trouble pronouncing "Heimlich," and he brought down the house when he said that we were all going to get a lot of practice on the Heineken maneuver!—

WCO Kim Pritts, northern Lancaster County

DWCO Waiter marks 40 years of service

If anyone deserves commendation. DWCO Joe Waiter does. After a tour of duty with the Marines in the South Pacific, Deputy Waiter began service with the Fish Commission as a deputy fish warden under Russel Wolmesdorf. He then served under district officers Sherer, Buck, Yoder, Manhart, and me. DWCO Waiter should be highly commended, not only for his long years of faithful service, but for his work above and well beyond the call of duty. Every aspect of his work has been performed with much extra effort. I'm sure that DWCO Waiter will be with the



Here are license buttons purchased by John "Jay" Hixson, of New Columbia. He bought them from two different issuing agents during consecutive years. See the numbers? What are the odds?—Gary W. Walter, deputy waterways conservation officer, Union and Snyder counties



Commission again when the Commission marks with pleasure and honor his 50th year of service.—

Claude M. Neifert, waterways conservation officer, northern Luzerne, Carbon counties

National Fishing Week June 2-8, 1986

Angler-Poets

Pennsylvania Angler would like to see Readers send in sublime poetry. The rhyme scheme shouldn't stray From AABBA. We'd like limericks. On this let's agree.

The subjects of these could be boating,

Your favorite fishing, or dry flies high floating.

Any like topic you write Would surely be all right.

But send no more than three for our voting.

We'll print the best ones, not the worst.

And remember — we can't be coerced Into using limericks late
Of our firm cutoff date.
The deadline is July the first.

Send reader contributions to: The Editor, *Pennsylvania Angler*, P.O. Box 1673, Harrisburg, PA 17105-1673. We can't pay contributors for these poems, but we'll include the name of the contributor with each limerick we publish.

Dear Fish Commission



These questions and requests are typical of the many we continually get from children during the course of a year — the main reason for starting PLAY.

The intent of PLAY is to provide children who have an interest in fishing, boating, and the aquatic environment with information that will help them become more knowledgeable and skilled in pursuing activities associated with these areas.



- Where are some good places to fish near my home?
- How do you fish through the ice?
- Do copperheads cross with watersnakes?
- My friend says snakes don't die until sundown . . .
- Do frogs give you warts?
- I am writing a paper about pollution . . .
- What is acid rain?
- May I have everything you have about fish, boats, snakes, turtles, and frogs?
- I want to grow worms in my house.
- I need a lot of new lures. I lost mine last summer. Do you have any?
- My teacher told me to write a report. Can you help me?
- Can you send me a picture of a trout?
- Here is a story I wrote. How do you like it?

Just as some children take to little league baseball, scouting, and instrumental music, others take to fishing. Some kids always seem to be fishing, bringing in snakes and turtles to class, or when writing assignments are given, they always make their project associated with nature. Every chance they have, their noses are inside the pages of a nature or natural history book.

Do you know similar youngsters? Perhaps he or she might be interested in becoming a member of PLAY. A \$2 membership is a small investment to make in starting a child on a lifetime of fishing pleasure. For complete PLAY details, contact Steve Ulsh, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.



You have a fishing friend in Pennsylvania



Straight Talk

ACID RAIN — AGAIN YET

We have reported to you about the Fish Commission's resolution and statement of policy regarding acid rain, and we have been pleased by the responses from members of the Congress and the U.S. Senate. Pennsylvania's Acid Rain' Caucus in the General Assembly has 33 members from both the House and Senate and from both sides of the aisle.

Just in late April, HR 4567 was introduced in the U.S. Congress with 150 co-sponsors, of whom eight are Pennsylvanians. This is a compromise acid rain bill which is now in the Energy Committee (Health and Environmental Subcommittee). It is expected to be reported out in late May or early June. We wrote to all of the Pennsylvania Congressmen, thanking them for this enlightened legislation, albeit a compromise.

The SO_2 and NO_X reductions are in two phases. The electric generation sources must reduce SO_2 by 5 million



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

tons by 1993, and an additional 5 million tons by 1997. The nitrogen oxide emissions from electric utilities and stationary industrial boilers would have to be reduced by 4 million tons by 1997. The states would be responsible for developing strategies for achieving the mandated emission reductions, and would be free to use any effective emission control method. This is an important change from a bill, HR 3400, considered and rejected in 1984, which would have required utilities to install expensive scrubbers or replace plants.

This current legislation would also make room for a "mid-course correction" before Phase II requirements went into effect. EPA would be required to report to Congress in 1993 on the reduction in acid rain achieved during Phase I of the program and the feasibility of meeting Phase II requirements. Congress could then make adjustments in the program, if needed, or Phase II implementation would be triggered.

With a goal of preventing electric rates from climbing more than 10 percent, the bill would establish a federal trust fund to subsidize the costs of installing pollution control equipment on electric utilities. Specifically, that fund would be available to pay for interest on loans or bonds used to finance control technology. HR 4567 would also require tighter nitrogen oxide emission standards for new cars and trucks, and stricter controls on nitrogen oxide emissions from new power plants.

Preliminary analysis by the Office of Technology Assessment shows that the costs of controlling SO₂ emissions under this bill would run between \$4 billion and \$5 billion per year. Including the nitrogen oxides, there are private estimates that a total cost could be about \$5 billion per year.

Options that vary in price include installing flue gas scrubbers on electric plants, switching to a cleaner-burning low-sulfur coal, building new plants, or using new "clean coal" technologies, which should be

available by the mid-1990s.

We are appalled to read that the Environmental Protection Agency has told a House subcommittee that two or three more years of scientific research are needed before stronger efforts can be made to combat air pollution. Administrator Thomas of the EPA and Energy Secretary Herrington have stated that the Reagan administration strongly opposes the bipartisan HR 4567, as that legislation "would impose significant unwarranted costs on utilities and consumers," and cause major shifts to natural gas and imported oil by utilities and industries now using coal.

I hope there is a great audience out there saying, "We've had enough of this." To protect the dividends of shareholders and allegedly protect consumers from something that they have already said they're willing to pay for, the shortsighted utilities led by the Edison Electric Institute are still saying that there is no problem, and even if somebody proves to them that there is a problem they don't know who is causing it and controls are too costly.

In the meantime, irreversible damage is occurring. More than 4,000 lakes in New England and the upper midwest Appalachia and Florida have almost exhausted their capacity to buffer acid deposition. Certain species of trees found at high altitudes in the Green Mountains of Vermont and the southern Appalachians are declining. The Environmental Defense Fund has found that smelter emissions in the western United States are related to acid rain increases as far as 600 miles away.

After more than 3,000 studies of acid rain in the past 15 years — which makes it one of the most highly investigated scientific issues of our time — the coal and electric utility industries have put up an impressive attack on the consensus of scientific opinion that acid precipitation is causing major environmental damage.

They aren't even talking about the adverse effects on public health.

Haven't you had enough?

Falk W. Phele

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Pennsylvania ANGLER

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The Cover

This month's front cover shows Lycoming County Angler subscriber Don Bastian working a Wooly Bugger in Cumberland County's Letort Spring Run. Photo by Dave Wonderlich. For some specifics on fly fishing success, catch the article that begins on page 23, and for some special trout fishing experiences, see page 6.

Anglers Notebook30



Why Row?



by Art Michaels

f you fish in a 12-foot to 14-foot boat, even with a small horsepower and electric motor, you may think that rowing is a skill you needn't count

on seriously—something to do only in those rare cases when your motor dies. But if you consider how much rowing you actually do, you may be surprised that you row a lot more frequently than you thought you did. If you sharpened your rowing skills, the quiet approach of rowing to hotspots can help you increase your catches. In addition, honing your rowing know-how lets you get out of a jam quicker, and it can greatly increase your fishing success by letting you sneak quietly into secluded hotspots.

Here are seven more ideas on how to get the most from your rowing ability and equipment.

If you're a few miles from the launch ramp and your motor dies, rowing may be the only way back to the dock. For long hauls like these, use a stroke that conserves energy but keeps you moving—appropriately called "the fisherman's stroke." Instead of pulling both oars at the same time, in this energy-saving stroke you pull each oar alternately. It takes a little practice to keep your heading straight, but with only a small amount of practice, you can master this technique.

Not all anglers are in top physical condition, so if you find yourself in a rowing predicament, this technique can be a real lifesaver.

When you're rowing, you can't compensate for poor weight distribution in your boat as easily as you can while motoring. Before you begin rowing anywhere, especially a long distance back to the dock, be sure your gear is spread out evenly in the boat, and make sure passengers are sitting in the middle. Trying to row a boat loaded with equipment against the wind is tough enough without needing to compensate for weight that is poorly distributed. If you're rowing with someone in the boat, let him or her navigate so that you don't have to stop rowing and turn around every so often.

Take a close look at your oars. Are they actually the best ones for you and your boat, or did you get any old pair because "oars are oars"?

Oars vary in their length, width, and intended uses. For one thing, I prefer rowing so that the oar handles do not cross over when I recover from each stroke. I find crossing oars on each stroke awkward, but others think nothing of it. Be sure your oars are the right length for your boat and for your rowing convenience.

My oars are on the short side, because they let me maneuver my 12-foot boat through stick-ups of all kinds easier than if I were using longer oars. My boat is 51 inches wide, and the oar locks are 47 inches apart. I row comfortably and efficiently with 5½-foot oars.

Silence your oar locks. Nothing spooks fish more than squeaky, creaking oars splitting the quiet at a hotspot. Clean the oarlocks regularly with a rag and white grease, such as Siloo (1.75-ounce tube for about \$1.40), Sears white grease (2-ounce tube for about \$1.59), or Phil Wood (3-ounce tube for \$1.99). I use this stuff once or twice a season, and my oars remain quiet.

Mount the oar pins on the oars so that they grip positively. I wrap a small piece of cotton cloth around the pin on the oars so that when I tighten them, they grip the oar securely. These pins have been firmly in place on my oars for about 12 years with no slipping or damage to the oars.

be sure they're straight. Sand them thoroughly, but do not paint the oar handles. When you row, painted oars tend to cause blisters faster than oars that are left unpainted. However, painting or varnishing the rest of the oar delays wear. You may also want to consider caps for the ends of your oars, but I never bother with them. When I bought my oars new 16 years ago, I sanded them and varnished them three times. Since then, I've repeated the process only once, about eight winters ago. My oars are still in great shape.

If you don't often row, you may want to keep a pair of inexpensive all-cotton gloves (under \$2) in your tackle box just in case you need to—or want to—row a lot. Eight years ago my engine died about 1½ miles from the dock, and I had to row myself back into a stiff wind. Aside from a day's worth of aggravation, I had painful, tender blisters from that experience that bothered me for several days. Gloves would have avoided, or at least minimized, the difficulty.

Finally, remember that rowing has advantages over motoring in some fishing situations. It's a skill you should use in circumstances other than just during emergencies. If you take care of your rowing skills and equipment, they will take care of you when the time comes.

PA

Backpacking in for Wilderness Trout

by Dave Wonderlich

f you're at all like me, you are driven crazy by those great trout fishing stretches that are miles back in. You know, the ones that take two hours to walk to before you begin; where the fishing is so good and the terrain so rugged that as dusk begins to fall you have actually fished very little of the creek. You feel stricken as you gaze at the mouth of a great feeder stream and the deep pools of the main stretch, and you know there are miles of barely fished blue-ribbon water just waiting in front of you. On this occasion, you might even stretch your stay, hurrying along the banks to catch just one more trout, then you have to walk the whole way back in the dark.

When I take this final fling, an adult's version of one more big-fished dip into the forbidden cookie jar, the area around the bend always looks better than anything I saw all day. Frustration sets in. It seems I never do get to those sections that are just out of reach. One evening while trudging back on an old lumbering road I use to return to civilization, I decided I was going to plan another trip back in, but this time I was going to stay for a while.

I'll never forget that first trip; for a time I felt as if I were doing something wrong. There were no time schedules, no noontime tipoff that the day was half over, or sundown marking the hour for those last few casts. There were no restrictions: Fish where you want, when you want, and as long as you want . . . the things an angler's dreams are

The pack-in took only a few hours of leisure walking; we didn't set any records for traveling distances. We knew what area we wanted to fish, so we backpacked to a good site in the center of the location and set up camp. This was backpacking in to fish, not to travel or see the country. Dave, my son, and I took one tent, we each had an old sleeping bag, we had fishing gear we knew we couldn't be without, and our backpacks were filled with food and supplies.

We reached the spot we had chosen on an earlier fishing trip just before noon. By one o'clock the tent was up, sleeping bags laid out, lunch was tucked under our belts, and we were fishing. Dave went downstream while I went up to the spot I mentioned earlier.

There it was, the elusive stretch. I had six more hours of daylight, then two more days to explore the tributaries. There was also time to locate lunkers, then go back to try to fool them in the evening.

Dave and I each brought back two trout for our afterdark dinner. Dave also carried back the first story of a big fish. He was attempting to cast his small C.P. Swing to the head of a pool where the riff meets the dropoff. He hooked



into a 9-incher just before he saw the broad form of a big brownie disappear under a dark ledge.

The next morning when I finally unzipped my bag, Dave was already at the pool. He bent low and cast down along the ledge. He reeled in and cast again. Dave lost his concentration for a second and looked at the scenery his position afforded when WHAM, the trout took lure, line, and rod downstream. He fished the equipment out, but the trout was gone.

I took many nice trout in the upper reaches, but three stand out from all the rest. One afternoon I worked my way up a little trib and put a size 16 Light Cahill under a branch at the head of a small pool. The water splashed as a big redspotted brownie took, and bore down into its hole. It was a battle of give-and-take. My rod had to be held parallel to the water because of the thick overhanging branches. Finally, I was able to slide the net under what I consider to be a trophy trout for the water: a 15½-inch deep-bellied brownie. It was heavy, small-headed, had deep red markings, a big red splotch on its adipose fin, and flesh the color of salmon. The next little pool produced a trout just like the first; I could have jumped across either pool!

The other trout I'll never forget fell prey to a Royal Wulff. The fly rode high through a small, deep run between big rocks. The fish barely broke the surface when it hit, and I knew right away it wasn't a big one. I got down to a spot where the fish could be landed without harm, and then I drew the fish into a small cove. When it came out of the deeper water, I just stared. It was a trout, but the colors were like none I had ever seen. The belly and one-third the way up its side was cherry red. The back and sides were olive with gold and red spots circled with blue halos. The brookie scooted back to his home, and I took my brownies and headed for camp.

Pennsylvania is literally loaded with areas just like the one that got me started; not too far to walk back in, but far enough that they aren't fished much. Most of the streams have trails or old lumbering roads paralleling them that make walking easy. You'd be surprised at the numbers





Backpacking in lets you sample those streams that few anglers try. It's a special kind of wilderness fishing in Pennsylvania.

and good size of many of the trout, not to mention the superb scenery.

How do you find out where to go? The Pennsylvania State Bureau of Forestry allows backpacking and camping on its land, so the best place to start is with a Recreation Guide map to Pennsylvania State Parks. The map shows in general terms where the state forestry land is located. Pick a state forest land area that contains a good trout stream, then send for the detailed map of the specific area. The maps are available free from your local state Bureau of Forestry office.

When it comes to picking a good watershed for backpacking and fishing along with locating a good area for a campsite, the local foresters are a great help. To do the job right, send for a copy of the special publication *Trout Fishing in Pennsylvania* (\$2 postpaid) from the Fish Commission Office of Information. It lists many of the best trout waters in the Commonwealth, and it can be used as a cross reference with the forestry map.

Regulations for camping vary between districts, so you should check with the office in the area you plan on camping in.



Generally, backpackers do not need a permit unless they plan to stay in one location more than three nights. Open fires are permitted unless there is a temporary ban because of dry conditions causing a forest fire hazard. Certain areas are closed to camping, such as within 100 feet of any stream where special fishing regulations are in effect, within the watershed of any stream serving as a municipal watershed,

in the flood plain of many of our larger creeks, and in any area that is marked closed to camping. After pinpointing the spot you wish to backpack into, contact the nearest forestry office for specific regulations and information.

Family units such as large tents, tent trailers, camping vans, large trailers, or mobile campers must have a free permit issued by the Bureau of Forestry. Family campers



are allowed in one spot for as long as seven nights. State forest land near both state parks and private campgrounds is closed to camping.

You are not walking for great distances, or going to be hiking for days as a traveling backpacker would do, so your equipment does not have to be the best. The beginner

can get started with general camping gear plus a small tent and backpack. If you enjoy the experience, lighter, more versatile equipment can be purchased later on.

I got my JanSport backpack for \$10 when a local outdoor specialty store sold its rental equipment. If you don't have any camping "stuff," you can rent almost everything for a small fee from the better outdoor equipment stores. The best packs with frames start at \$89. Good names include Lowe, Marmot, North Face, Kelty, and Diamond Brand. Youth backpacks start at \$60 and are made by Kelty, Diamond Brand, and North Face. Lightweight camp stoves that take white fuel (Coleman) are Optimus and MSR, which is good in four seasons and very versatile; prices range from \$39-\$89.

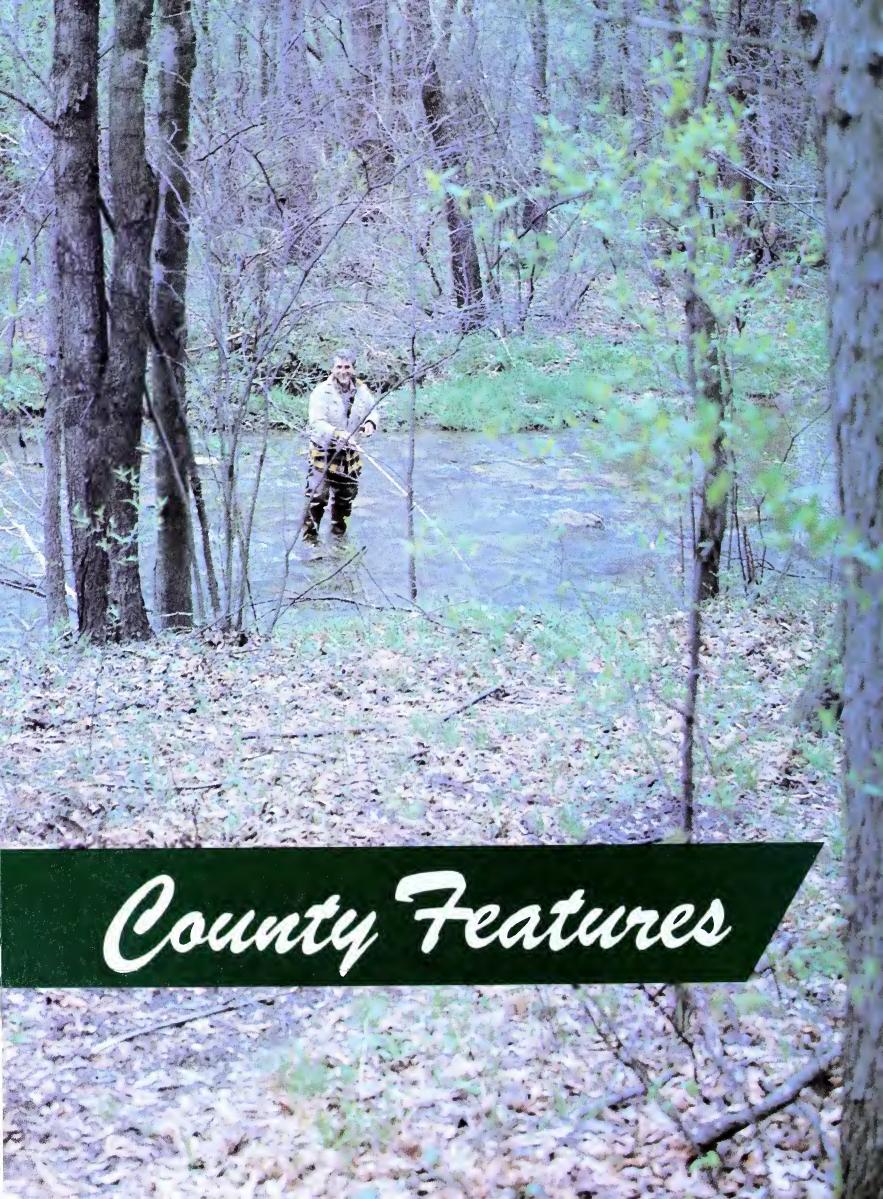
Tents in which you can feel safe from the elements are made of ripstop nylon, have a coated ripstop floor, and a fly that covers the top; prices range from \$130-\$450. Sleeping bags insulated with down start at \$99. Shop around, because there are many good deals out there. I'll probably have my \$10 backpack the rest of my life.

Almost every rod company sells backpacking rods. They come apart into three or four pieces and fit easily into a pack; some can be used for both fly and spin fishing. Reels and the rest of the equipment can easily be stowed where there is room. When I take a trip, I wear my hip boots and pack my moccasins. Hip boots aren't that comfortable, but they aren't bad for a few miles and the moccasins are a lot lighter in the pack than the boots would be.

hat do I take for fishing? My 7-foot yellow Fenwick fly rod, my old Cortland 444 reel with floating line, and several boxes of flies. Good all-around patterns for wilderness trout include a Quill Gordon, Adams, Light Cahill, a few Wooly Buggers for higher water, and a few terrestrials. Bait fishermen should come prepared with their favorite offerings, making sure to insulate the carrying package against the heat. Lure fishermen should be sure to carry several sizes of spinners; in low water and in smaller creeks later in the season, the smaller the lure, the better.

Freeze-dried food is made for backpacking, although when purchased in a specialty store it can be expensive. Your regular grocery store sells many dried foods that need only water and heating for preparation. Don't take food that requires refrigeration to prevent spoilage. Don't take any unnecessary chances in the wild! Nothing tastes better than those freshly caught trout, anyway.

The last afternoon of my first backpack trip, Dave decided to try the pool right below our tent. He moved his small spinning rod carefully through the air and the little C.P. Swing dropped silently into the base of the falls. The blades glistened as he drew the imitation along the current. Then, he shouted loud enough that anyone within two miles probably heard him, "I got it! It's big!" It was big: 21½ inches of wild brown trout. And it was from a stream that was no more than ankle-deep four miles below our camp in the wilderness.



Armstrong and Westmoreland Counties

Armstrong County by Emil J. Svetahor

rmstrong County is located approximately 50 miles northeast of Pittsburgh and covers 656 square miles of scenic rural country consisting mainly of small farms and woodlots. It can easily be reached via highways 66, 28, and 422.

Keystone Lake (Plum Creek Reservoir)

Keystone Lake is a very popular 1,000-acre impoundment located three miles north of Elderton, off Route 210. There are two Fish Commission access areas located on the lake and there is a 10 hp limit on boats. One access is off Route 210. The other must be approached by way of Route 85 through Rural Valley. There are two other unimproved accesses.

Various fish species may be caught in Keystone Lake, including largemouth and smallmouth bass, walleye, channel catfish, crappies, bluegills, lake and brook trout, and muskellunge.

During the spring months, crappies may be caught near the sunken brushpiles located off the NuMine Access Area. Some very large bluegills can be located in the less accessible coves throughout the lake. After the walleye season arrives in May, the old stream bed in the northern section of the lake produces excellent catches of walleye. Successful fishermen use medium-size minnows or a worm harness baited with a nightcrawler to entice this tasty fish.

Largemouth bass can be fooled with plastic worms or minnows in the Reefers Cove area and around the NuMine Access Area. Smallmouths, ranging in size from 12 inches to 24 inches, seem to prefer the steeper east shore toward the southern end of the lake. Use small minnows, spinnerbaits, Rapalas, and Rebels to land one of these battling bronzebacks. In the deeper waters near the dam, it is possible to catch lake trout using downriggers with live bait during the summer months.

Although fishermen land muskies year-round in the lake, early May is best for a period of about three weeks. Large shiners and large muskie lures are the best bets when fished along the shallow weed beds in the cove areas. Adult brook trout are stocked in early October, and wet flies, small minnows, and spinners are recommended for those who wish to fish for these fall trout near inlet streams.

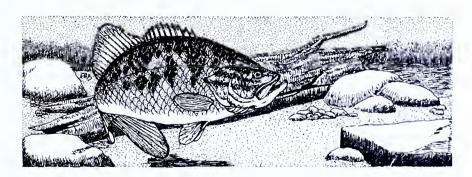
Ice fishing can produce decent stringers of crappies, bluegills, and walleye for fishermen using minnows, mealworms, and small jigs. The area immediately off the Atwood Access Area, Reefers Cove, and the cove by the NuMine Access Area traditionally produce the best action for fishermen willing to brave the cold temperatures on Keystone Lake.

Mahoning Lake

This 800-acre warmwater impoundment is an Army Corps of Engineers project that is leased and controlled by the Fish Commission. It is located three miles north of Dayton. There is a Fish Commission access area and launch ramp off Route 839 just south of Milton. Fishing is best from a boat; in fact, a boat is necessary equipment here because shore accessibility is very limited. There is a 10 hp limit on boats on Mahoning Lake.

Largemouth and smallmouth bass, northern pike, walleye, muskellunge and crappies are just some of the fish one may find on the end of their line.

In the late spring, 8-inch or 10-inch crappies can be located wherever there is sufficient structure available. In late May, fishermen using downriggers produce catches of walleye up to 26 inches by following the old stream channel. The muskies become active during the fall and will readily strike an offering of large shiners, chubs, or suckers fished along the shoreline, especially near the dam.



Crooked Creek Lake

Crooked Creek Lake, 350 acres, is an Army Corps of Engineers project located off Route 66 approximately 10 miles south of Kittanning. Largemouth bass, crappies, and bluegills are available to the angler who fishes this lake. Early spring is the best bet for crappie fishing in the afternoon hours. Successful fishermen use jigs and small minnows and fish along the partly submerged trees along the shoreline.

Allegheny River

This scenic, navigable river flows approximately 51 miles through Armstrong County from Emlenton to Freeport. There are five lock and dam systems on the river in Armstrong County, beginning with Lock and Dam #5, mile marker (mm) 30.4, at Freeport upriver to Lock and Dam #9, mm 62.2, approximately two miles south of Watersonville. There is a public launch ramp, mm 29, located in Freeport below Lock and Dam #5. The Fish Commission has the Applewold Access Area and launch ramp, mm 44, located south of Applewold Borough. In Kittanning, there is a municipal launch ramp, mm 45, located off South Water Street, and the Game Commission has a boat launch, mm 54, in Templeton. There is a Fish Commission access area and launch ramp located in East Brady, mm 69.5. In addition to these public launch sites, there are numerous private marinas where one can launch a boat for a small fee.

The areas immediately downstream of the buoys below all the locks and dams are traditional hotspots for walleye, sauger and bass. Fish the slack water and use jigs, large minnows, and worms for some excellent fishing, especially in the late spring and early fall.

Cogley's Island across from Manorville is a shallow natural area that is the most productive spot of pool 6. It is a vast place of shallows and small islands owned by the Western Pennsylvania Conservancy. Only small boats can navigate the shallows here.

Ross Island, mm 39.6, located near the mouth of Crooked Creek, is a very good location for some huge muskies. Fish the shallows around the island and use chubs, shiners, or suckers.

The Allegheny River from the village of Rimer, mm 60, upstream to Lock and Dam #9 is a hotspot for smallmouth bass. For best results fish the west side of the river with minnows, Rapalas, and spinners. Another bass hotspot is from the bridge at Parker upriver to the confluence with the Clarion River.

Redbank Creek

Redbank Creek flows for 21 scenic miles along the Armstrong/Clarion County border and is inhabited by bass, northern pike, and walleye. Early summer and late fall are the best times for fishing success from the New Bethlehem area downstream to the Allegheny River. Redbank Creek is suitable for float trips with the most interesting section from Climax to Lawsonham.

Mahoning Creek

Mahoning Creek is a scenic warmwater fishery that flows from the outflow of Mahoning Lake downstream for 22 miles to the Allegheny River. Largemouth and smallmouth bass, walleye, northern pike, and muskies can be caught in this productive waterway. The stilling basin immediately below the dam is terrific for walleye and northern pike. Rapalas, spinners, and minnows produce the best results. The stream above the lake flows into Jefferson and Indiana counties, and offers some of the best area smallmouth bass action.

Crooked Creek

The outflow area below Crooked Creek Lake has recently been developed to accommodate handicapped or elderly fishermen. This area is a traditional hotspot for

walleye, muskies, bass and crappie in the late spring and early fall. For best results, fish the area immediately below the outflow with small minnows, jigs, and floating Rapalas or Rebels. From the outflow area downstream to the Allegheny River, the smallmouth bass fishing can be very good. Wade this section of Crooked Creek using minnows or Rapalas, fishing the pools immediately below the fast water during the late evening hours in the summer months.

Cherry Run

Cherry Run is heavily stocked with brook and brown trout beginning from where L.R. 03058 crosses Cherry Run downstream to where it empties into Crooked Creek. The lower section of Cherry Run flows through Army Corps of Engineers property and approximately the last two miles of creek can be reached only by walking. Minnows, flies, and worms work best on this favorite trout stream from April to May.

Buffalo Creek

Buffalo Creek is the longest trout stream in the county, 17.9 miles, and it also receives the most stocked trout. Buffalo Creek is stocked with brown and rainbow trout from its confluence with Little Buffalo Creek downstream to a point 1.5 miles below the Route 228 bridge at Boggsville. The most popular baits are salmon eggs, mealworms, minnows, and spinners fished from April to July. Catches of smallmouth bass add to the versatility of the creel on Buffalo Creek.

South Fork of Pine Creek

The South Fork of Pine Creek is the most scenic trout stream in the county, flowing through forested valleys with very little development. Over 9 miles of this beautiful waterway are stocked with brook and brown trout beginning in Echo downstream to the Allegheny River. Trout can be caught year-round in the South Fork of Pine Creek by fishermen using flies, minnows, and worms, although April to July are the best months for trout fishing.

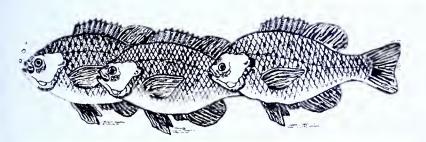
Glade Run

Glade Run flows through residential areas with walking the only way to reach the more secluded, forested areas. It is stocked with brook and brown trout from the Route 268 bridge downstream to the L.R. 03105 bridge. April to May are the best times to be on this creek using worms, minnows, and small spinners.

Plum Creek

Plum Creek is the only trout stream in the county to be stocked with all three species of trout. Stocking begins at the confluence of the North and South branches of Plum Creek downstream to Crooked Creek. Plum Creek mainly flows through farmland with parking limited and a great deal of walking required. The best time is during the month of April using worms, minnows, and salmon eggs as bait.

Emil J. Svetahor is the waterways conservation officer for Armstrong County. For assistance with this manuscript the author thanks Jim Smith, Commission Law Enforcement Division training officer, who is formerly the Armstrong County WCO.



Westmoreland County by John Mahn

estmoreland County offers anglers a wide variety of species and angling situations. Swift mountain streams holding native brookies, gentle rivers with muskies and walleye, and quiet lakes loaded with bass provide year-round angling opportunities. Wherever you find yourself in Westmoreland County, good fishing is always close by.

Donegal Lake

Located on Route 711 between Donegal and Stahlstown, this 90-acre lake is owned by the Pennsylvania Fish Commission. Managed primarily as a warmwater fishery, Donegal also receives a stocking of winter trout. In spring and summer, anglers can take bass and muskies almost anywhere on the lake using small Rapalas or live minnows.

Donegal has good populations of catfish and panfish that respond well to worms or other live offerings, and the waterway has recently received stockings of walleye fry. Because of the winter stocking of rainbow and brook trout, ice fishing is productive at Donegal. The lake has a launch ramp and four parking lots, but anglers are restricted to using electric motors.

Keystone Lake

Keystone Lake is primarily a cold water lake, receiving brook and rainbow trout stockings. Fishing is best in spring and again in the winter, when anglers take trout through the ice. Best baits for trout include salmon eggs, marshmallows, and minnows. Keystone also holds a fair population of panfish that can be taken on worms or jigs with small twister tails. The 78-acre lake is owned by the Department of Environmental Resources, and boaters are restricted to using electric motors. The lake is part of Keystone State Park, located just south of New Alexandria on Route 981.

Loyalhanna Reservoir

Loyalhanna is a warmwater fishery, best known for its good bass and crappie populations. Muskies, walleye, and the new "sunshine bass" hybrid can be found in this Corps of Engineers impoundment. Spring is the best time for taking crappies, using either small minnows or twister tails. The best bass fishing usually comes early in the summer, as soon as the season opens. Jigs, spinnerbaits, and plastic worms all take their share of largemouths.

Loyalhanna stretches some 4 miles upstream from the dam, and depending on water levels, anglers can find fish almost anywhere on the lake. The "Bush Area," located on the eastern shore a few miles upstream from the dam, has a

launch ramp and a camping area. From the Bush Area down to the dam, the lake has numerous inlets and cover that holds bass and crappies. Unlike largemouths, sunshine bass prefer more open water. A cross between a white bass and a striper, the sunshine roams the lake in schools, and can be difficult to find.

Loyalhanna holds an excellent bullhead population, and anglers take them everywhere on the lake with worms and prepared baits. To reach the lake, take Route 981 from New Alexandria.

Upper and Lower Twin Lakes

Located in a Westmoreland County park, both lakes receive stockings of rainbows and brook trout. The lower lake gets trout in the spring and again in the winter, but has a good natural population of crappies. The upper lake receives only winter trout because it is more of a warmwater fishery, with good numbers of bass, catfish, and crappies. Fishing in the lower lake is usually better during winter or spring, with mealworms, maggots, and salmon eggs producing better than artificials.

Fishing on the upper lake usually improves with the coming of warmer weather. Crappies succumb to tiny jigs and spinners, while trout and bass respond to the usual offerings.

To get to the park, take Route 30 east out of Greensburg. Make a left onto Donohoe Road and follow the signs to the park.

Allegheny River

The Allegheny serves as a boundary between northern Westmoreland and Allegheny counties. From Garvers Ferry down to New Kensington, first-rate bass and walleye fishing can be found along its entire length. In recent years, anglers have also started taking good numbers of crappies from this stretch of river. Trolling the shoreline with Hot'N Tots just bumping the bottom seem to be the ticket for taking walleye. For bass and crappies, anglers usually drift downstream, casting to likely spots with small jigs and spinners.

Youghiogheny River

The Yough flows through the southwest corner of Westmoreland County and provides some of the best smallmouth bass fishing in this part of the state. Smithton, West Newton, and Sutersville, are the top areas. This portion of the Yough yielded the state record smallmouth a few years back. The Fish Commission stocks sub-legal muskies, walleye, and bass in the Yough to ensure its future as a top fishery.

From Jacobs Creek downstream to West Newton, the river is well-suited to wading. Access is very good in this stretch, but river flow is fast, and anglers should use caution when wading. Sportsmens clubs in Smithton and West Newton stock this section heavily, so trout fishing in this area is excellent. Wading anglers usually cast spinners or live bait upstream and let them drift down with the current. There are numerous deep holes in this stretch and the river is fairly wide, providing plenty of castable water.

From West Newton downstream to the Allegheny County line, the Yough slows and becomes an ideal place to float a small boat or canoe. In this slower moving section, muskies and walleye can be taken in addition to trout and smallmouth. Best times to fish the Yough for trout are spring and early summer. Later in the year water levels drop off and water temperatures become too high to produce consistent results. When the weather warms, most Yough anglers switch from trout to smallmouth or walleye. Although some trout do carry over from year to year, anglers have to search the deepest holes to get results. In the slower section of the river, warmwater species remain active all year. Spinners, crankbaits, and drifted live offerings all produce well.

Monongahela River

The Mon also forms a portion of the county's southwest border. From Belle Vernon downstream to Milesville, anglers can reach the river from Route 906. Shore access is limited, but boaters can launch at Belle Vernon, across the river at Charleroi, or downstream in Webster.

Trolling crankbaits along the shoreline will produce bass and walleye with a few muskies thrown in for good measure. Walleye fishing below the Lock #4 Dam is particularly good in the spring when they gather before spawning. Most are caught on a nightcrawler or a jig and minnow. Last summer, this area also produced the first legal-size (15 inches) sunshine bass to be taken from the Mon. The 17-inch fish was believed to be part of the original stocking of 10,600 fingerlings made in 1983.

The area below the dam also produces a few trophy smallmouth each year. Because there is so much natural food, the best results come from what they're used tominnows, and crawfish. Look for shoreline structure, large rocks, or trees that have fallen into the water. Pay special attention to any small stream that flows into the river. These areas always seem to attract lunkers.

Jacobs Creek

Jacobs Creek is stocked pre-season and in-season with brown and brook trout. Spring and early summer fishing produces the best results. Minnows or the usual trout spinners will take fish, and the best area to try starts at Laurelville on Route 31. From there, fish upstream to the top of Three Mile Hill, one of the better streams in the county. Jacobs Creek also has a productive stretch where it flows alongside the Pennsylvania Turnpike between New Stanton and Donegal.

Roaring Run

An isolated stream in the extreme southeast corner of the county, Roaring Run is stocked with brook trout. Minnows account for most of the fish taken, and fishing is usually best in the spring. For the angler who wants to get away from the crowds, Roaring Run is a good choice. Start at the town of Champion, where the stream enters Indian Creek, and fish upstream for approximately 2 miles.

Indian Creek

The most productive portion of Indian Creek is from Jones Mill at the intersection of routes 31 and 711, south into Fayette County. Stocked with browns and brook trout before and during the season, Indian Creek offers good fishing right through the summer. Many areas of the stream are too small to work artificials effectively, so live offerings drifted with the current are probably a better choice.

The creek runs along Route 711, offering good access

along much of its length. Because of its excellent carryover of trout, Indian Creek is a good stream to fish in the fall.

Four Mile Run

This stream has a reputation for being one of the better trout waters in Westmoreland County. Four Mile Run makes up Donegal Lake, so anglers begin fishing right below the dam. From there, browns and rainbows are taken down to where the stream flows into the Loyalhanna at Route 30. Fishing is good throughout the year, with the uppermost section producing good catches in the fall.

From the dam downstream for about two miles, Four Mile Run flows through quiet wooded sections, giving the angler the opportunity to get away from the crowds. For much of its 11 fishable miles, Four Mile Run runs alongside

the stream, so access is not a problem.

Mill Creek

Mill Creek receives generous stockings of rainbows and browns, so fishing is good all season long. The lower end of the stream is wide and slow-moving, well-suited to fly fishing. The upper section is mostly fast running water. The most productive section of Mill Creek is from where it enters the Loyalhanna at Ligonier, upstream along Route 711 north to Oak Grove. Late in the season, the upper end of the stream near Oak Grove is the best place to find trout.

Loyalhanna Creek

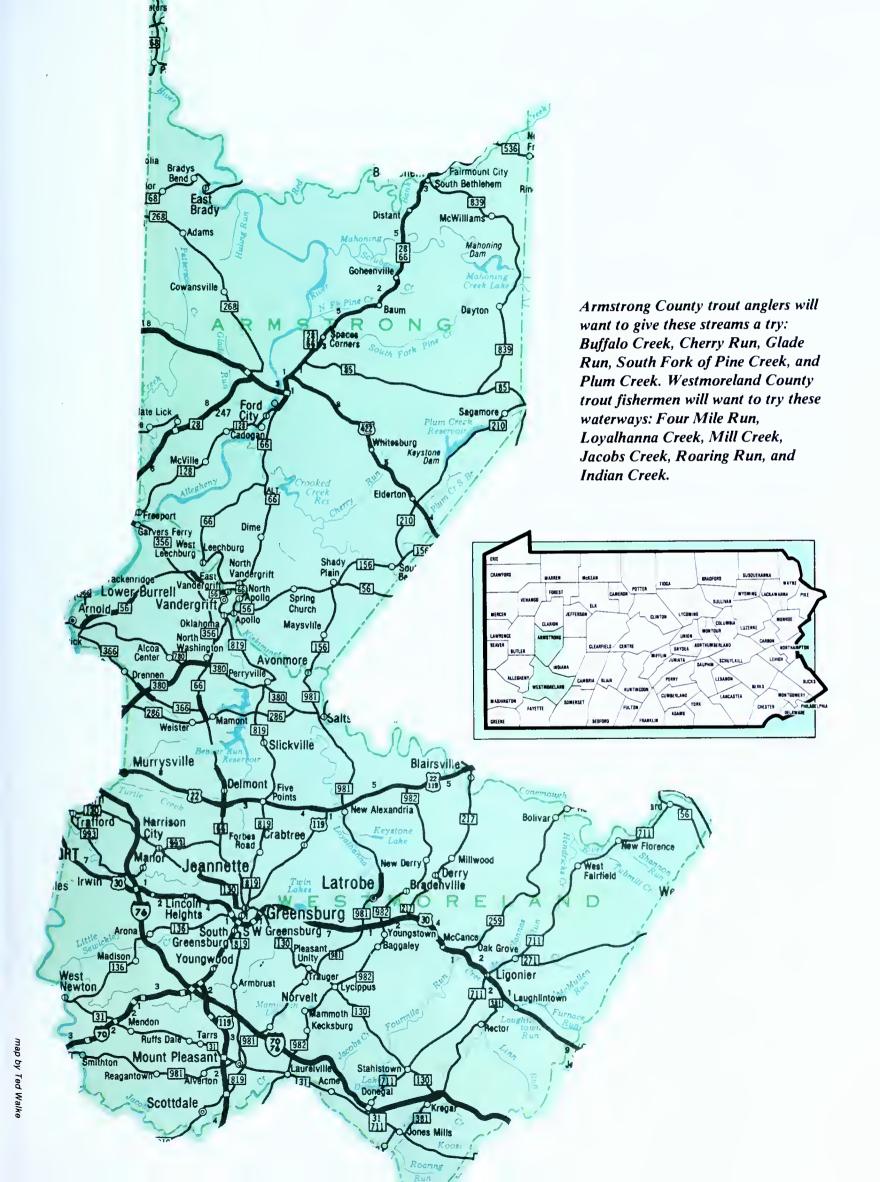
The Loyalhanna is Westmoreland County's premier trout stream, and offers outstanding trout action all year long. It is stocked from Ligonier downstream to Kingston, and from a management standpoint, the creek is divided into three sections.

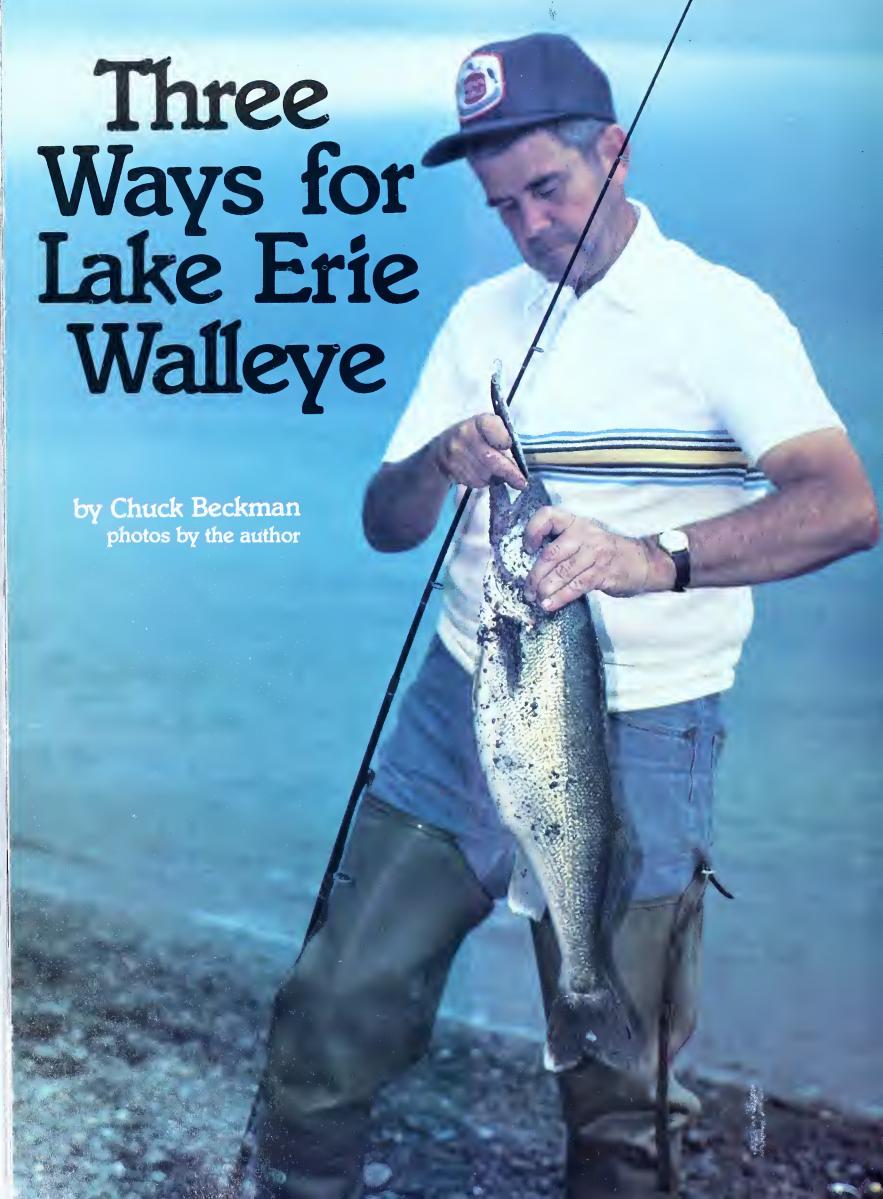
Section 2 runs from the fairgrounds bridge on Route 30 down to the Route 711 bridge. This portion of the Loyalhanna receives rainbows and browns, and is approximately two miles long, and is governed by the regular seasons and regulations.

Section 3 runs from the Route 711 bridge downstream to L.R. 64071, a distance of 1.5 miles. Section 3 is a delayedharvest, artificial-lures-only area. This area is open all year long, but fishing is catch-and-release during the spring. From June 15 to the last day in February, minimum size is 9 inches, and the creel limit is three trout (combined species). Fishing in this section is, of course, limited to artificials, making it a favorite of fly anglers.

Section 4 runs from L.R. 64071 down to Kingston, is subject to regular seasons and limits, and also receives stockings of rainbows and browns. Because of its popularity with anglers, the Loyalhanna is more heavily stocked than any other stream in the county. A local club float stocks the stream, so fishing is good almost anywhere along its length. Good access is provided by Route 30 which parallels the stream for much of its length. All standard trout baits work on the Loyalhanna, and because of its size and diverse regulations, offerings range from cheese, salmon eggs and worms, to streamers and spinners.

John Mahn is a freelance writer/photographer. For his help with this manuscript, he gratefully acknowledges Don Hyatt, Commission waterways conservation officer for Westmoreland County.





anglers refused to acknowledge Lake Erie walleye as walleye: "Yellow pike," they were called. The pattern of behavior for yellow pike, it was obvious, differed from that of inland walleye: Yellow pike never lurked in water shallower than 20 feet nor deeper than 40; yellow pike never appeared in any quantity before the Fourth of July, and finally, yellow pike spurned any lure that didn't have a nightcrawler ribboned out the back. Or so went the conventional wisdom.

Funny thing: About 10 years ago, there appeared on the lake large boats, piloted for the most part by out-of-town anglers. These boats were decked out with all the equipment needed for the lake's strongest gales, and they began to invade the same walleye grounds that belonged to the old-timers and their deep-vee

mahogany Larsons, Whirlwinds, and Lund boats.

The newcomers proved to be something of an annoyance to the oldtimers: The boats created larger wakes, which agitated the relatively small fishing holes; things beeped and flashed on their dashboards; they frequently trolled in north-south tracks, at 90-degree collision courses with the old-timers who had traditionally trolled a polite distance from one another in parallel east-west lines. The old-timers still remained comforted by the fact that they consistently hung stringers over the side, while the newcomers never seemed to show fish.

This too changed when, back at the docks, the occupants of the big boats hauled coolers off their boats, the walleye inside tumbled over one another like logs. The only thing worse than being challenged by a



hotshot is being outfished by one.

Since then, Erie anglers have made a lot fewer assumptions about what a Lake Erie walleye will or won't do. As a result, fishing methods in the lake have expanded to include every opportunity the Central Basin offers to catch these wide-backed fish whose translucent eye provides no clue to its unpredictable behavior.

Walleve on the beach

The word used to be that you never caught Lake Erie walleye until midsummer. Still, rumors abounded about anglers making late-night trips in late May and early June to the lake shore, throwing Rapalas or spoons and returning home with armstretcher pike.

Shore fishing is, to me, the most exciting way to catch a walleye. The technique of standing on the beach and catching pike is so new in these parts that all the secrets have yet to be discovered. Trial and error has shown that walleye this time of year are the barracudas of fresh water, stalking the shallow flats and ambushing unsuspecting prey.



In fact, to the dismay of members of Erie's 3CU Trout Club, the walleye's favorite prey last spring turned out to be the four-inch to seven-inch steelhead trout planted days earlier in the lake. One fish I caught last spring contained three newly stocked trout whose initiation into the real world of Lake Erie was hostile and short.

Battle implements for on-shore Lake Erie walleye include a short, medium-action rod with a fast tip, a reel spooled with 8-pound test, and Rapala-type lures, painted like rainbow trout and capable of diving up to seven feet. While representational lures like these seem to produce best, don't hesitate to try large Mister Twisters, alphabet-style crankbaits, or flashy spoons like Johnson Sprites and Les Davis Hot Rods.

Cast these lures out and work them like a musky jerk bait back toward you so that the lure flashes as if wounded. If you're doing it right, your family doctor may soon see a kinesiologic disorder similar to tennis elbow: walleye wrist.

The where-to is another of those elements yet to be systematized, but experience tells me to search out onshore locations with temperature variances, such as those found at creek mouths; sudden shore dropoffs are also productive, as are bouldery bottoms. Last spring, hotspots included Virginia's Beach, near the Ohio state line; the mouth of Elk Creek; the area around the Hammermill paper plant; Orchard Beach; and Shorewood in North East.

Near shore

Boats, large and small, comprise the method of fishing for the near-shore pike that begin appearing the first week in July and stay until the first part of September. These near-shore waters (one-half to two miles) provided the battlegrounds in the early days between the old-timers and the high-tekkers. That, incidentally, is over now: Over time, it was discovered that on some days the old-timers, equipped with willow leaf or June Bug spinners, outproduced the boats with the 30-year mortgages.

The near-shore walleye grounds that people have fished for years all bear certain similarities: All feature rocky or irregular bottoms in a lake well-known for its rolling, golf courselike contours. Fish from boats in 25 feet of water off any of the areas already mentioned, and you'll find fish. Add to that list the rockpiles off Godfrey's Run and Kelso Beach (both accessible from the Walnut Creek Access Area), and the tally is complete.

Other methods besides the slow-asa-swimming-elephant trolling technique will produce walleye. On a day with a fresh wind, try drifting. The jury is still out over whether motor noise disturbs fish, but given the choice, I prefer a silent approach.

In Lake Erie, it never hurts to experiment: Dabble with deep jigging: 1/4-ounce Mister Twisters, maribou jigs, or 1/4-ounce to 1/2-ounce spoons frequently keep anglers as busy as do the worm harnesses. With the rigorous action of jigging in 30 feet of water, you won't even have to catch a fish to tire yourself out.

Offshore

There's a story that used to make its way around local fishing circles about the Canadian fisherman who, on catching his first pike of the day, tied a balloon to a string, attached the string to the fish, then threw everything over the side. Pitched overboard, the fish towed the balloon and all in the direction of the school from which it came.

Fishing in deep water broadens the problems of being able to consistently locate fish. As recently as five years ago, no one ever ventured out deep for walleye, and the walleye that were caught were taken incidental to salmon.

The first problem well-addressed is precisely how to find the walleye. Enter the buzzing dashboards: In the last two years, accurate commercial-quality LCD (liquid crystal display) and video graphs have become available at prices ranging from \$150 to \$400. The increased sensitivity, longer screen image time, and better definition of the projected image can now tell fishermen almost everything they need to know, short of what kind of snack the fish is thinking of.

In 1985, the most productive deep water was also the easiest to find. The 70-foot to 80-foot deep area, commonly known as "the Trench," lies 5½ miles straight out the mouth of the Walnut Creek Access area.

Once in deep water, the problem

then becomes how to fish on the bottom for walleye. Fortunately, the walleye themselves have resolved that one: They suspend. On good days, a depth graph will mark the fish starting at 20 feet down, all the way to the bottom. Last year, the 30-foot to 40-foot depths seemed to be the magic location. Downriggers reach that depth quickly and accurately. More productive in 1985 was the method of "flat-line" trolling, a fancy term for running a deep diving plug on 50 to 80 yards of line out the back.

Whatever their water-depth prediction, Lake Erie walleye remain content to accept the same lures whenever they prowl. Bagley Kill 'R B II deep divers (in silver/blue scale), lime-green Hot-'N-Tots, and other deep alphabet crankbaits all reach depths of 60 feet if trolled with a 4-ounce sinker. Even a light resistance spoon such as an Alpena Diamond or flutter-type spoon may be trolled at the right depths. As a last resort, wire line or planers get you as deep as you need to go.

In deep water, the clash between the old-timers and high-tekkers disappears: The middle of the lake is no place for a small boat. Nick Clement, deputy waterways conservation officer, reports towing an average of two boats per day during the high-traffic summer days. Fill up the gas tank and check your plugs: Don't venture out on the lake with almost-right equipment. Trihulls, as fine a boat as they are for river running, should stay off the lake. The same goes for bass boats with the barber chairs that set a high center of gravity. Watch the deepwater fleet leave the Erie channel for a day of fishing, and you might think you're watching ocean charters heading out to the Gulf Stream: The boats are wide, deep-hulled, and sturdy.

Personally, I'm as happy to hook a walleye from shore as I am to fight one from the fishing platform on a 30-foot Bayliner.

In recent years, thanks to increasing angler experimentation, the walleye has become the equal-opportunity fish of Lake Erie. The debate may still rage in local circles about whether yellow pike and walleye are the same fish. My own feeling is this: If anything has changed in Lake Erie over the years, it's the fishermen. The walleye remain the same.

Worm Fishing Secrets by Chris Dolnack

Ithough they are one of the most effective bass lures, many anglers don't like to fish plastic worms. Successful worm fishing requires concentration and patience, but these attributes alone won't guarantee that you'll catch fish. Here are 16 worm fishing secrets that can make an old standard the deadliest weapon in your bass fishing arsenal.

1. The most popular worm colors are black, grape, blue, green, and strawberry. Try black or grape in stained water; blues, greens, and reds in clear water.

2. Worm size is every bit as important as color. Have a variety of sizes on hand ranging from 4 inches to about 8 inches. The diameter should vary because short, thin-diameter worms fall quicker

and create less water disturbance than do longer, thicker worms.

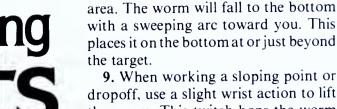
3. Hook size is largely a matter of choice. Try a 2/0 hook with 6-inch to 8-inch worms and a 1/0 with smaller

4. More fish are lost because of dull hooks than anything else, especially when worm fishing. A razor-sharp hook penetrates the plastic and into the fish's mouth. A very effective sharpener is the Luhr-Jensen hook file.

5. For easier hookset, push the point of the hook all the way through the body of the worm, then retract the point. This tactic eliminates driving the hook through the plastic on the way to the mouth of a bass.

6. Spool your reels with a thindiameter premium monofilament line. In clear water, 8-pound or 10-pound test is a good choice. Use 12-pound or 14-pound test in discolored water. Heavier lines offer abrasion resistance and permit strong hooksets.

7. Keep a taut line. The straighter your line, the easier it is to detect pick-ups. Hold your rod at a 10 o'clock position. When you see or feel the pick up, drop the rod tip six to eight inches and set the hook strongly.



9. When working a sloping point or dropoff, use a slight wrist action to lift the worm. This twitch hops the worm down the grade. The worm moves a more exaggerated distance than what

8. Cast five or six feet past your target

you imagine.

10. The Texas rig is an all-around weedless rig for use on the bottom and in heavy cover. The sinker slides up and down the line just ahead of the worm. The hook is pushed through the head of the worm and out the side. The barb is then buried back into the worm body, making the offering weedless.

11. The Carolina rig lets the worm float or swim above the bottom because the sinker is kept higher up the line by a swivel. Tie the worm on with a one-foot or two-foot leader. Sinkers up to one ounce are common. Carolina rigs are effective when fishing clear-bottom lakes or river currents.

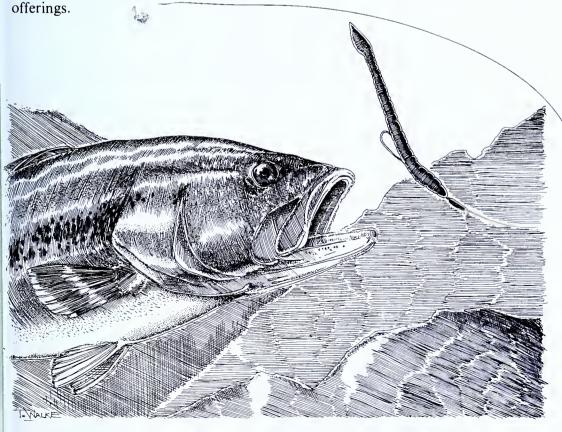
12. Nick Creme introduced the first worm with an in-line spinner. Featuring a three-hook harness, the Creme worm has red beads and a silver propeller blade adding flash. Fish it on the surface, on the bottom, or at intermediate depths.

13. Use the lightest sinker necessary to get your worm into the strike zone. A 3/16-ounce slip sinker is a good allaround choice, but a ½-ounce or 5%-ounce weight is sometimes necessary to fish heavy cover.

14. Many anglers "peg" their sinkers when flipping. To peg a sinker, place it against the head of the worm. Insert a toothpick into the hole the line passes through, and break it off flush with the lead. This prevents the sinker from sliding up the line and allows the worm to fall head-first on the cast.

15. Bass have highly developed olfactory senses. Use this to your advantage by applying a fish attractant to your worms. The scent reinforces the visual stimulus and triggers the fish's feeding mechanism.

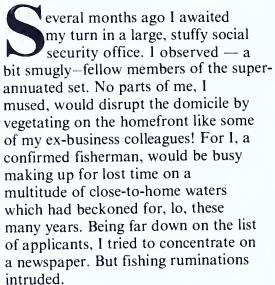
16. The advent of 100 percent graphite-fiber rods has revolutionized worm fishing. The superior strength and sensitivity of graphite is ideal for a worm rod. The most successful worm fishermen now lean toward a 5½-foot to 6½-foot graphite rod with a light tip and power butt.



Try this systematic, productive and enjoyable method of fishing the varied and extensive waters of the Commonwealth.

Timetable of Pennsylvania Angling

by Sam Slaymaker



Among my earliest memories is one of my grandfather taking me to the Octorara Creek, near our ancestral family farm and home near Gap, Pennsylvania. Evidently, we didn't do well because my grandfather bought a stringer of sunfish from a couple of boys to avoid coming home skunked! There were other more successful outings with him there, as well as on the Pequea, Conestoga and Conowingo. And when I was 12, my grandfather stocked trout for me in Houston's Run, which crosses the farm.

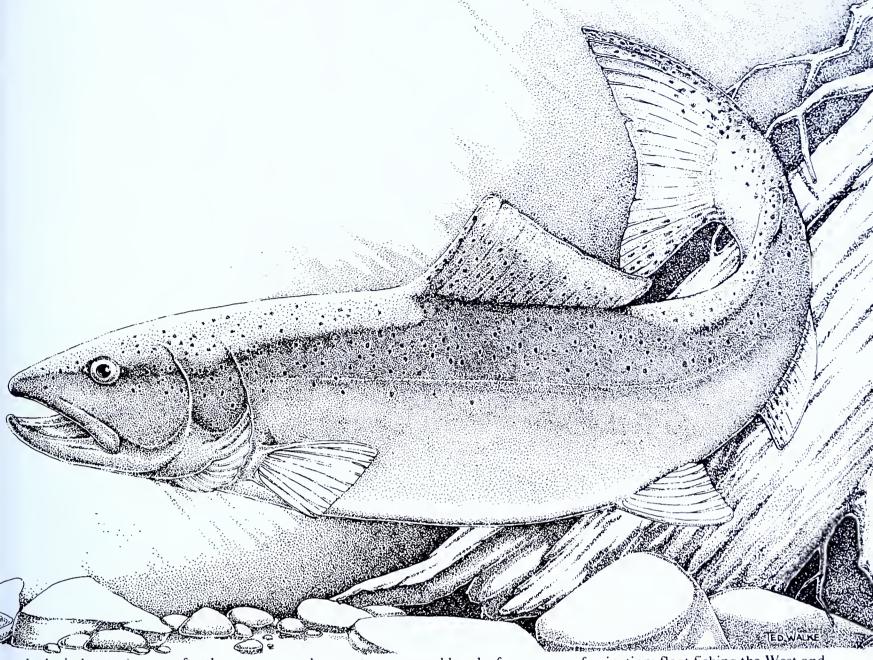
During teenage years, I fished with friends around Andrews Bridge on the Octorara and on the Susquehanna River where we plugged for smallmouth bass and trolled for walleye. Once, when fishing with a girl, my outboard engine konked out, and the single oar was lost. I guided the boat by wading—now and again touching bottom—toward the York County shore. Late at night I made it, shivering as much from cold as from fright.

After service in World War II, I became a serious advocate of fly fishing, through the kindness of the late John Stauffer of Lancaster. For 25 years we fished Pocono streams. While working as a traveling salesman, and later as a sales executive, I was able to fish throughout the U.S. and Canada.

My stock-taking (an appropriate train of thought for a social security applicant!) was interrupted by a friendly bureaucrat. But not for long. On the way home and over succeeding weeks, I cogitated about using retirement years to fish those Pennsylvania waters that for too long a time had been forced to a back burner. The following timetable resulted.

Since shad runs are traditional harbingers of a new fishing year, I projected an early April outing for American shad in the lower reaches of the Delaware River. After corralling some boat-owning friends, I could follow the run upstream from New Hope to well-known hotspots such as Lumberville, Upper Black Eddy, Shawnee, Matamoras, Pond Eddy and Lackawaxen. I might extend my





shad trip by staying over for the opening day of trout season in the Poconos.

With the end of the shad run, l would concentrate on trout in the Brodhead, Tobyhanna, Lackawaxen and Bushkill creeks. I longed to become more familiar with the Bushkill. It is one of the most scenic areas I've fished; but, regrettably, on only a few occasions. This same plan holds true in our "upper tier" counties. I would fish here most of May, concentrating on Slate Run, Young Woman's Creek, the Loyalsock, Grey's Run, Kettle, Pine, and Sinnemahoning creeks. May could be wound up fishing the famed Green Drake hatch (around Memorial Day) on Penn's Creek.

If a camper would be handy and economical for these trips, it would prove invaluable, together with a canoe, for float fishing Pennsylvania's major river systems during June, July and August. Numerous public and private camp grounds along many of

these waterways would make for relaxed and comfortable progress.

Fly fishing for smallmouth bass has got to be one of the most exciting and relaxing forms of sport fishing.

According to many knowledgeable and well-traveled anglers, superb results can be experienced on two of the prime smallmouth fisheries in the country, the Susquehanna and Juniata rivers.

Over recent years I've enjoyed wading the Susquehanna around Marysville (a few miles above Harrisburg), and floating the Juniata from Thompsontown to Amity Hall. But now there will be more opportunities to explore these river systems in their entirety.

Because I've never fished the Little Juniata, an excellent trout stream just below Tyrone, I would start here for trout and then, below Raystown Lake, drift the river for smallmouth, down to its confluence with the Susquehanna near Harrisburg.

The next project holds great

fascination: float fishing the West and North branches of the Susquehanna that converge near Sunbury, and continuing down the main stem to Harrisburg. Here is a trip of about two hundred total miles through excellent fishing waters and strikingly scenic country. What with the immensity of these stretches, it would be wise to maintain a steady-to-rapid pace, to permit time to concentrate on the obvious and better-known hotspots. Maps and instructional manuals are particularly beneficial on unfamiliar reaches of river because access areas and mileage data are included.

Late August would signal a trip that has excited me for about 10 years. In the mid 1970s, the Pennsylvania Outdoor Writers Association held a fishing outing near Coudersport, in Potter County. I enjoyed splendid trout fishing on the headwaters of the Allegheny River, in that area a narrow, riffle-filled stream with a good number of native trout.

I've had a hankering to continue that trip by wading for trout and continuing on until the river becomes floatable and smallmouth abound. It would be fun to explore and fish the Allegheny to the environs of Pittsburgh.

Early September is the perfect time for terrestrial fishing for trout in catch-and-release sections of such famous Cumberland County streams as the Yellow Breeches, Big Spring, Letort and Falling Springs. Because these lovely, placid streams are open all year, I could enjoy their pastoral quietude through Indian summer days and well into autumn. It will be high time, too, for me to match the tiny Caenis hatch along some of these waters, as well as Spruce Creek in Centre County. During occasional balmy days in the winter there will be opportunities to fish these Cumberland County limestoners with sow bug and shrimp imitations.

T ow the year has come full circle. Most of my time will have been spent in eastern and central Pennsylvania fishing the most productive waters at opportune times. During the next year I would work the western part of the state. In addition to the aforementioned Allegheny River, there are the Ohio and Monongahela rivers, which total about 100 miles of excellent and largely untrafficked fishing; not to mention the Youghiogheny River, well-known to whitewater rafting enthusiasts. I would plan combinations of drift fishing and wading, with concentration on prime water, as noted in Fish Commission publications.

Before attacking western rivers I would hit principle trout streams in April and May. In the northwest are the celebrated Slippery Rock and Big Neshannock and Pithole creeks. And among the many streams in the southwest are some I've always wanted to fish; namely, Loyalhanna, Laurel Hill, Little Mahoning and Clear Shade creeks.

Pennsylvania is well-known for its muskellunge fishing. All the major river systems contain flourishing numbers, as do a lot of lakes and impoundments. I've seldom fished for muskies. So I shall be anxious to troll these many areas, particularly the nearby Susquehanna and Juniata.

Musky catching—never easy—will be facilitated by the Pennsylvania Fish Commission's highly successful experimentation with the introduction of the hybrid tiger muskellunge—a cross between a purebred musky and a northern pike.

Perhaps the most exciting and successful project in the history of the Pennsylvania Fish Commission has been the reclamation of Lake Erie and its conversion to an outstanding salmon fishery. In addition to large numbers of coho and chinooks, there are many rainbow and brown trout. Since I am a total stranger to Lake Erie fishing, I would plan on lake fishing with some experienced friends and/or charter boats, not to mention fly rodding in the tributaries when fish begin fall spawning runs. I would also plan some bass fishing in the Presque Isle Bay area and in Lake Erie itself.

As I approach a more sendentary way of life, lake fishing becomes more appealing. And with the recent marriage of two daughters and the prospect of grandchildren looming, the incentive plan for panfishing forays with children on Marsh Creek and other nearby Fish Commission lakes becomes an interesting possibility. Interesting, too, will be fishing for purebred striped bass in lakes Wallenpaupack and Raystown, not to mention hybrid stripers in the lower Susquehanna and nearby lakes.

The Fish Commission's efforts to develop, stock and maintain lakes for warmwater sport fishing is second to none. There are 4,000 manmade impoundments, in addition to many natural lakes, across the Commonwealth; far and away more than one could include in a couple of years of concentrated fishing.

And that's precisely what my ruminations in the social security office led up to; a couple of years of planned-in-advance Pennsylvania angling. Given the immensities of Pennsylvania's fishing possibilities, my plans are necessarily sketchy. But they are systematic and easy to arrange, thanks to Fish Commission publications. These cover every conceivable aspect of Pennsylvania fishing, clearly and interestingly.

Even though this timetable permits a mere scratching of the surface, it is cause for exhilaration. I can't wait to get started!

Publications on Where to Go Fishing

The Fish Commission has available a variety of publications on where to go fishing and boating in Pennsylvania. Here are some:

- Delaware River Fishing and Boating Guide is an 8-page special publication that provides detailed information on the Delaware River's angling and boating opportunities. The publication also contains a map that shows the locations of 30 Delaware River boating accesses in Pennsylvania, with 12 more accesses on the New Jersey side.
- Bass Hotspots in Pennsylvania is a 4-page overview of the best bass fishing areas in Pennsylvania. The publication features more than 65 waterways with special emphasis on the Allegheny, Juniata, Schuylkill, Delaware, and Susquehanna rivers.
- An Angler's Guide to Fishing
 Southcentral Pennsylvania's
 Limestone Streams, by Gerald Almy,
 is an 8-page look at the specifics of
 successfully fishing the Letort, Falling
 Spring, Big Spring, and Yellow
 Breeches. The information stresses fly
 fishing strategies and recommended
 flies.
- Suggested Maps and Guides for Paddling Pennsylvania's Waterways is a paddler's guidesheet that shows where to get maps for all of Pennsylvania's major river systems.
- Salmon Fishing in Pennsylvania is a 4-page view of Lake Erie salmon fishing opportunities for shore anglers and boatmen.
- Warmwater Fishing in Pennsylvania is a 24-page booklet that provides an inside track on where to fish, with detailed maps showing the locations of the state's best warmwater angling waterways. License and boat registration information as well as hotspot tips and camping and hiking information make this publication a valuable addition to any angler's tackle box. This booklet is available for \$2 postpaid. Checks or money orders must accompany orders, which should be made payable to Pennsylvania Fish Commission.

The other publications are free, but include a self-addressed, stamped legal-sized envelope with requests. Contact: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.



characteristic facial twitch (the after-

effect of seeing a three-pound brown

rise to a fly barely five millimeters

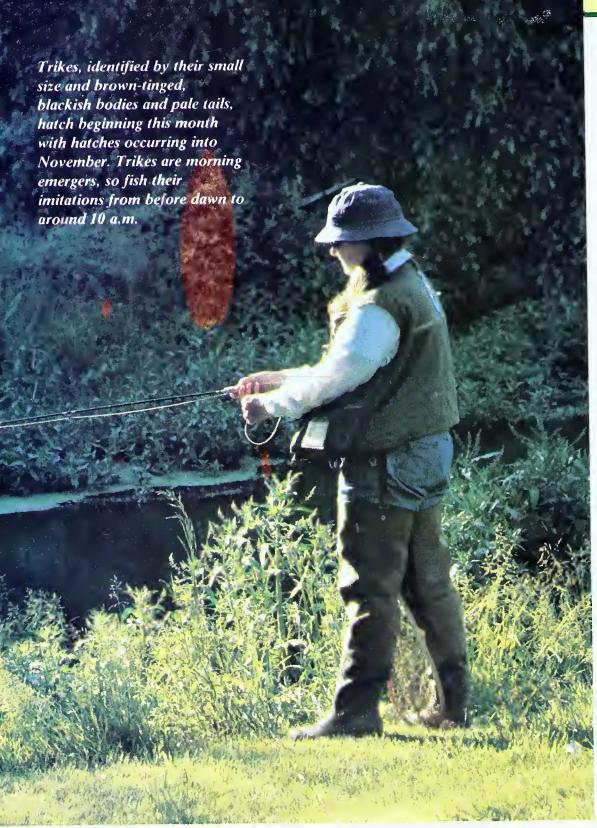
trike spinner

June 1986 23

littlest mayflies provide some of the

frustrating days of every season.

most challenging, rewarding, and yet



Tricorythodes

The best known of the tiny Ephemeropterans are members of the genus Tricorythodes. For some time these insects were mistakenly identified as belonging to the genus Caenis, and it is not all that uncommon even today to find anglers who use the terms "trikes," "tricos," and "caenis" interchangeably. "True trikes," however, can be readily identified by their small size and their brown-tinged, blackish bodies and pale tails. The spinner stage is easier still to recognize: they have whitish tails and abdomens and a dark brown (often black) thorax.

The nymphs present a difficult

problem. Their extremely small size makes identification virtually impossible. But there is no real need to capture a clutch of nymphs, invest in a microscope and an entomology textbook, and spend a month studying the naiads. Besides, even if you're never witnessed one before, you'll know a "trike" hatch when you see it.

Hatching activity begins in the middle of June and may continue into November (especially on limestone streams) when frosts or heavy rains cut them short. The "trikes" are morning emergers, with the hatch often beginning before dawn and seldom lasting beyond 10 a.m. On

cool, wet mornings, the hatch will usually start later and last longer.

These concentrated bursts of activity are virtually daily occurrences on many streams. During the hatch, the trout are incredibly selective. But size and shape are more important than color. If you can capture one of the duns, try to use an imitation of the same size. Let others worry about whether or not their flies have two or three tails.

The presentation of a chosen fly must be flawless. Experienced fishermen work into a position as close as possible to the trout, keep casts short, and use a leader as fine as they can handle (at least 6X). Also, it is a good idea to concentrate on one or two fish and leave the rest for another day.

As the hatch progresses, the trout will sooner or later switch from dining on duns to supping on spinners. You must then change flies. It's often hard to tell precisely when the trout stop feeding on duns, but if a well-presented dun pattern is refused more than twice, it's time to start thinking spinner.

Caenis

A "trike" hatch can be fun exasperating, but fun. Yet, it can't compare with a good emergence of the "true caenis."

The members of the genus Caenis include the tiniest known mayflies, some so small that they are beyond the possibility of imitating. Still, they are often an important part of the trout's diet, especially during summer.

Caenis hatches take place from June through September, but they are not as predictable as the "trikes." "Real" Caenis hatches can take place in the morning, mid-afternoon, or early evening. They also appear to be more common on "freestone" streams. Although they are extremely small, they are readily recognizable. The duns have pale gray wings and bodies ranging from pale yellow to cream. The spinners have clear wings and bodies ranging from pale yellow to cream. The spinners have clear wings and cream bodies (sometimes with a gravish tinge).

To handle these hatches, tiny imitation duns must be tied, carried, and used. The same tactics that worked with "trikes" work when the miniscule pale duns are on the water.



There is a third group of micromayflies. Even more difficult to classify than the Caenis and Tricorythodes species, they belong to one of three related genera: Cloeon, Pseudocloeon or Neocloeon. Together with the larger, more familiar Baetis species, these insects are known to anglers as the "blue winged olives," and "BWOs."

The "blue winged olives" are multibrooded: two or three generations are born, grow to maturity, mate, and pass on during the season. They are also widespread, found in almost every trout stream.

No matter which genus or species is emerging, the tactics used during hatches of the smallest of the mayflies are the same. Patterns change, but presentations remain the same. Then, too, all the hatches of micro-mayflies present similar, but unique, challenges.

The tiny size and infinitesimal weight of these miniature duns and spinners cause difficulties. They are prey to the slightest breezes. The faintest puff of wind can send the duns careening across the surface of the stream like little sailboats. Trout will often chase the duns for surprising distances, slashing at them savagely. The cagey angler, of course,

will notice this and try to mimic the antics of the duns by manipulating the fly.

Caenis

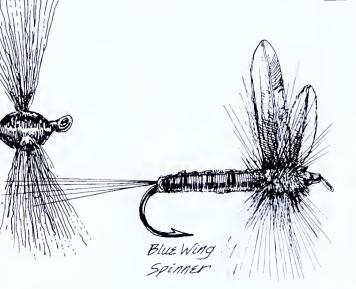
SDINNER

He will fail. It is impossible, no matter how fine the leader or how skillful the fisherman, to intentionally make an artificial behave like a winddriven dun. But if, by ill chance, a fly should be unintentionally dragged over the surface, it will seldom put the fish down. Once in a while, it will even bring on a strike, but only on a windy day.

During "trike," "caenis," or "BWO" hatches, trout will often behave in a disconcerting fashion—feeding as if they didn't have an enemy in the world. This does not mean that an angler can blunder at will. The trout's studied unconcern is more apparent than real. They are wary, wild predators with instincts honed to a fine edge. They are aware of every change in their environment, of every intrusion. Caution and care are the watchwords, always. But it is nice, every once in a while, to fish when the trout are willing to forgive a mistake in approach or presentation.

Another challenge is that these hatches are brief but heavy. It is best, then, to concentrate on one or two fish, repeating the cast time after time until the fly is over the fish at the precise moment that the trout make its move to suck in another tidbit. It takes patience and willpower (ice water instead of blood in the veins and nerves of tempered steel help) to stand thigh-deep in a stream while fish are rising all about and keep after the same quarry cast after cast. But it is the best way to take a trout when the little, littler, or littlest mayflies are on the water.

And you can be sure of this: The little mayflies, "trikes," "caenis," and "BWOs" will be on the water this season and for seasons to come, delighting trout and turning anglers into addicts.



For the fly box

Trike Dun

Hook: Mustad #94842 or equivalent, sizes 24 through 28 Thread: Black 6/0 prewaxed Wings: Clump of dark dun fibers, either hen hackle fibers or polypropylene wing material Tails: Medium dun hackle fibers

Body: Black polypropylene dubbing (can be mixed with small amount of dark brown)

Hackle: Medium dun

Trike Spinner

Hook: Mustad #94842 or equivalent, sizes 24 through 28 Thread: White 6/0 prewaxed Wings: Light dun polypropylene wing material, very sparse Tails: Light dun hackle fibers Abdomen: White tying thread Thorax: Black polypropylene dubbing

Caenis (Dun and Spinner)

Hook: Mustad #94842 or equivalent, sizes 24 through 28 Thread: Primrose 6/0 prewaxed Wings: Clump of light dun polypropylene wing material Tails: Light dun hackle fiber Body: Cream polypropylene dubbing Hackle: Light dun

Hook: Mustad #94842 or

BWO Dun

equivalent, sizes 20 through 26 Thread: Olive 6/0 prewaxed Wings: Medium dun polypropylene wing material Tails: Medium dun hackle fibers

Body: Polypropylene dubbing, olive, olive-brown, and creamy-olive (three parts olive, one part cream) Hackle: Medium dun

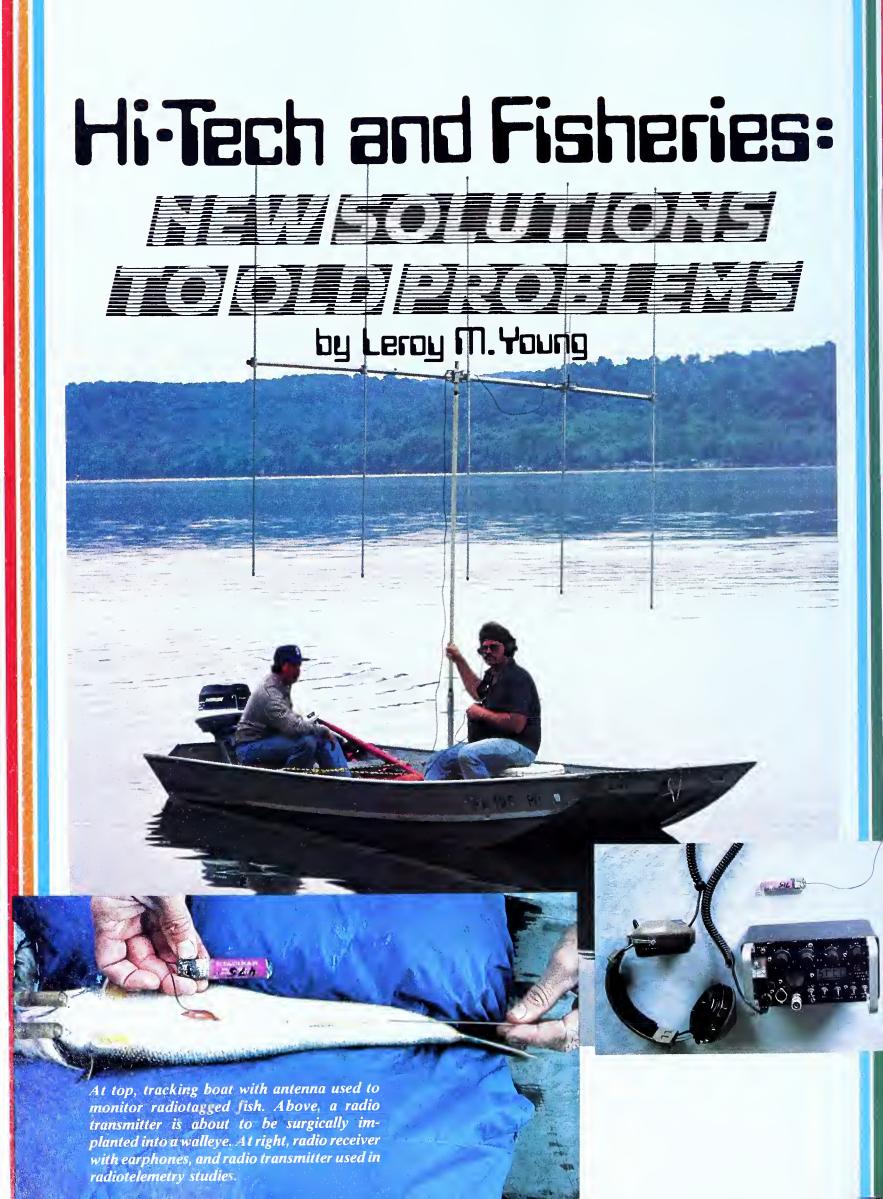
BWO Spinner

Hook: Mustad #94942 or equivalent, sizes 20 through 26 Thread: Olive 6/0 prewaxed Wings: Pale dun polypropylene wing material

Tails: Medium dun hackle fibers Body: Olive-brown polypropylene dubbing

Hackle: Light dun

Note: Hackle on the spinner patterns is entirely optional.



pace-age technology has affected all of us in one way or another. In recent years, computers have become an everyday part of life. We do our banking with automatic tellers, have our groceries checked by electronic "eyes" that "read" an array of black and white lines on the underside of packages, and balance our checkbooks with calculators of the same size. Digital readouts greet us on gas pumps and wrist watches, and radar guns greet us on the highway. Meals that used to involve hours of preparation now take minutes with a microwave oven. Even the way we spend our leisure time has changed with the advent of VCRs and video games.

As might be expected, fisheries biologists have not escaped this hi-tech onslaught. In fact, they have welcomed it with open arms. Complex fish behavioral and biological problems which were at one time almost impossible to understand are now being studied with a great deal of success using innovative techniques. And the more mundane yet very necessary procedures have been reduced to a fraction of the time once required, freeing personnel to do much more in an eight-hour work day.

Such advancements become selfperpetuating as more time can be spent developing new ideas. This is a tremendous benefit both to the biologist, as he or she studies the fishery, and ultimately to the angler, who reaps the rewards of increased knowledge of the resource and the improved fisheries management techniques that result.

Many recent advances in fisheries science are affecting Pennsylvania anglers to a greater extent than they probably realize. Other advances, although not used extensively in Pennsylvania at present, will undoubtedly find increased utility in the future. Here is a sampling of some of these new techniques.

Marking fish

Many studies of fish biology require that certain fish be marked, or "tagged," in some manner that enables them to be later differentiated from others of like species. Some of the biggest obstacles in this work have been finding tags that remain with a fish for a long period of time. The tagging problem becomes increasingly complex when one tries to mark very small fish, such as fry, or when trying to mark each fish uniquely so that each marked fish can be differ-



Computers greatly assist researchers. All the details in a 500-page fisheries report can be stored on a standard 5¼-inch floppy disk for instant retrieval.

entiated from every other marked fish. Several new techniques used to solve these problems are the OTC mark, coded wire tags, and PlT tags.

• OTC marking. OTC is short for oxytetracycline, an antibiotic used to treat bacterial diseases. It has been found that when very small fish are immersed in water treated with OTC, or when larger fish are fed OTC-laced feed, the chemical becomes incorporated within the fish's rapidly growing bones. These bones, which properly prepared in the laboratory and illuminated with ultraviolet light, give off a fluorescent yellow glow in the region where the OTC had been laid down.

This technique has been successfully used by Fish Commission biologists to mark the inner ear bones, called *otoliths*, of hatchery reared American shad fry that are only a fraction of an inch long. The OTC marks are helping biologists distinguish hatchery reared shad from those produced by natural reproduction of transplanted adults in the Susquehanna River, so that the effectiveness of the two stocking methods can be compared.

• Coded wire tags. Coded wire tags are tiny pieces of wire that have been given identifying marks or notches which can be used to differentiate fish as to age, hatchery in which produced, and other necessary information. These 1/32-inch tags are small enough to be injected painlessly into the cartilaginous snout of fingerling fish using a machine capable of tagging over 20,000 fish in a single day. When these same fish are collected from the wild years later, the tags can be either read with X-rays or extracted from the fish and read with a microscope.

Coded wire tags are being used successfully in Fish Commission, New York Department of Environmental Conservation, and U.S. Fish and Wildlife Service cooperative efforts to rehabilitate lake trout populations in Lake Erie. The tags allow biologists to determine the age and growth rates of stocked lake trout, and to determine which genetic strains of fish are surviving the best.

• PIT tags. Probably the newest and most fascinating tagging device currently in use is the PIT tag, which is short for Passive Integrated Transponder. PITs are actually tiny computer chips the size of a pencil lead that are wrapped with miniature antennae and injected into small fish using a hypodermic needle. The PITs are capable of holding up to 34 billion different electronic codes. Each code reveals much

about the individual fish that is carrying it

By aiming an electronic decoder at, say, a fishway, as a tagged fish passes through, a scientist can gather data without ever handling or even seeing the fish. PIT tags are being used extensively in salmon research on the West Coast and could be used in Pennsylvania sometime soon.

Tracking fish

Unlike birds and mammals, which are easily seen with the naked eye, fish are usually hidden from view as they cruise the stream or lake depths. Monitoring the behavior of these "invisible" animals is a problem that has perplexed fish biologists for years. Questions such as: Where do fish go after they are stocked; how deep, when, and by which routes do fish migrate to and from the ocean; and how do migratory fish respond when they suddenly find their routes blocked by dams or hydroelectric turbines, are being answered as never before by two relatively new methods: radiotelemetry and hydroacoustics.

• Radiotelemetry. Radiotelemetry is a method by which a radio receiver equipped with an antenna and carried by boat, car, airplane, or other means is used to monitor radio signals sent out from a transmitter attached to a fish. Transmitters consist of a tiny battery, antenna, and other electronic components encased in a cylindrical water-proof container. The transmitters can vary greatly in size, but most in use today are from 1 to 3 inches in length and ½ to one inch in diameter.

The transmitters can be attached externally, usually on a fish's back; inserted into a fish's stomach; or surgically placed within the body cavity. Each transmitter can be set at a different radio frequency, giving each fish a unique identity. Using this method, the location of individual fish can be pinpointed from distances of a mile or more for a period of several months, or in some cases, years.

A wealth of information on fish behavior, almost impossible to acquire by other methods, can be obtained by radiotelemetry.

In Pennsylvania, radiotelemetry studies during 1985 showed that many American shad adults stocked into the Susquehanna River for the purpose of restoration were quickly leaving the river, probably before they had

spawned. Steps are now being taken to correct this problem.

• Hydroacoustics. Hydroacoustics is another relatively recent innovation that allows biologists to "see" fish below the water's surface, and in some cases, actually count how many fish are present. Hydroacoustics systems used in fisheries research are basically advanced forms of the popular "fish-finders" used by many anglers today.

The system consists of a device called an echosounder that emits an ultrasonic signal or sound wave through a transducer into the water column. On striking an object, such as a fish, that has a different density than water, an echo of sound energy is reflected back to the transducer, which in turn can detect the signal. The signal can then be electronically transformed into an image on a color video display or a paper printout with the aid of a small computer. This same principle is used widely in the industrial and medical fields today, to do such things as "see" an unborn baby or to detect hairline cracks in metal.

Hydroacoustics is proving to be a valuable tool in shad restoration on the Susquehanna River where it is used to enumerate and follow the movements of juvenile shad as they attempt to migrate to sea past four lower river hydroelectric dams. This is all done without ever physically touching the fish, an excellent feature, because juvenile shad are extremely fragile and can die with even minimal handling, such as a slight brush with a net.

The computer and fisheries science

The computer is revolutionizing the nature of fisheries management and research. Several examples of this have already been noted. Other applications of the computer are innumerable. Computers make it possible to analyze vast amounts of data in a fraction of the time it would take if done by hand.

Take, for example, an angler use and harvest study that was done on Lake Erie during 1981 and 1982, in which 16,424 angler interviews and over 700 counts of anglers and boaters were made to determine: the numbers and species of fish sport anglers had caught from the big lake, how much time anglers and boaters had spent in pursuit of their hobby, and to develop a characterization of the Lake Erie angler. Analysis of this vast amount of data

would have been virtually impossible without the aid of a computer.

Computers have made storage of enormous amounts of data more practical and efficient. This plus is important when one considers that data from 45,000 miles of streams and over 4,000 lakes is being continuously collected by Commission biologists. A striking example of the space savings involved is that all the information in a 500-page fisheries report can now be placed on a computer's 5½-inch floppy disk.

Other ways in which the computer has revolutionized the fisheries field include such things as: 1) helping to calculate the annual allocations of 5 million trout to more than 800 Pennsylvania streams and 100 lakes in a fraction of the time once required; 2) allowing library research, a necessary prerequisite in any fisheries study, to be done in minutes by pushing a few buttons, instead of laboriously poring over the card catalogue for hours; and 3) making report writing much easier through the wonders of word processing.

With all that we've discussed here, we have literally just scratched the surface concerning the technological advancements that have recently taken place in fisheries science. Furthermore, new and more innovative techniques continue to surface with a rapidity that boggles the mind. These improvements in our ability to collect, store, and analyze fisheries data and thereby better understand the resource are tremendously exciting to the fisheries biologist.

Perhaps now you too have gained a similar appreciation for the strides being made behind the scenes to help ensure you the opportunity to play that next beautiful brown trout on a fly rod, or enjoy a day with your children fishing for bluegills and perch at a local waterway.

Leroy M. Young is a Commission fishery resource technician. He expresses his appreciation to Paul Heisey, RMC-Muddy Run Ecological Laboratory; Bob Williams, Barnes-Williams Environmental Consultants; Homer Zumstein, Allegheny National Fish Hatchery; and Mike Hendricks, Bill Frazier, and Rick Lorson, Pennsylvania Fish Commission for providing helpful information and photographs for this article.

ANGLERS CURRENTS

REGULATION ROUNDUP

by Dennis T. Guise

The Fish Commission will consider final adoption of several important fishing regulations at its July 1986 meeting. The Commission has approved publication of a notice of proposed rule-making containing the proposed changes and welcomes the comments and suggestions of the fishing and boating public concerning these proposals. The members of the Commission will review all public comments before taking a final vote on these regulations. As proposed, these changes to Pennsylvania's fishing regulations will take effect on January 1, 1987.

Some of the most important proposed changes in fishing regulations relate to fishing for bass. Effective in 1981, Pennsylvania went to a year-round bass fishing season on rivers and streams and on four of the largest lakes within or on the boundaries of the Commonwealth. The Commission is proposing some adjustments to the bass fishing regulations effective in 1987.

First, the Commission proposes to close the bass fishing season on Kinzua Reservoir, Lake Wallenpaupak, and Raystown Lake during the period from the opening day of trout season in April until the first Saturday after June 11. Second, the Commission is proposing to establish the same closed season for largemouth bass on Presque Isle Bay, Peninsular Waters and Lake Erie. Finally, the Commission proposes establishment of a trophy bass season on all flowing waters in the Susquehanna River Basin, including the Juniata River, West Branch and North Branch of the Susquehanna, and all tributaries in the system. During the period from opening day of trout season until the first Saturday after June 11, a 15-inch minimum size limit and 2-bass-per-day creel limit will apply to these waters.

The Commission has proposed these changes to bass fishing seasons in response to public concerns over the impact of angling on bass during the spring spawning season. If the regulations are adopted as proposed, the bass seasons on Lake Wallenpaupak, Raystown Lake, and Kinzua Reservoir will

be the same as those applicable to other Commonwealth lakes. The trophy bass season on the flowing waters of the Susquehanna River Basin will protect the majority of the bass from harvest during the spring season.

In addition to these proposed changes, the Commission has proposed to increase the minimum size limit for bass from 10 inches to 12 inches on the Pennsylvania waters of Pymatuning Reservoir. Ohio is proposing a similar size limit for bass in these waters, and this proposed change will bring Pymatuning Reservoir into conformity with other Pennsylvania lakes.

The Fish Commission will also consider final adoption of several other fishing regulations at its July meeting. These include:

- An increase to 31 inches in the minimum size limit for striped bass on the Delaware River and Estuary.
- A regulation requiring a permit to conduct certain fishing tournaments on Fish Commission-owned or controlled property.
- A regulation banning fishing tournaments during the closed season of the fish targeted in the tournament.
- A new special fishing regulation on lake fishery conservation regulations establishing special size and creel limits for warmwater/coolwater species on certain lakes.

The Fish Commission has also proposed the addition of 1.7 miles of the Middle Branch of White Clay Creek (Chester County) as delayed-harvest,

artificial-lures-only waters, and has named several lakes for proposed participation in the new lake fishery special conservation regulation program. The lakes include Blue Marsh Reservoir (Berks County), Lake Redman (York County), Lake Williams (York County), Opossum Creek Lake (Cumberland County), Conowago Lake, Pinchot Park (York County), Lake Arthur (Butler County), Kyle Lake (Jefferson County), and Sugar Lake (Crawford County).

The Fish Commission wants to know what you think of its proposed regulations. If you have comments, suggestions, or objections, write to Regulations, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673

Dennis T. Guise is the Commission chief counsel.

New Allegheny River Access Map

The Western Pennsylvania Conservancy has published a new map pinpointing 36 Allegheny River access sites from The Point in Pittsburgh to just below Kinzua Dam in Warren County.

The new map is available for \$1 by sending with requests a business-sized stamped, self-addressed envelope to: River Map, Western Pennsylvania Conservancy, 316 Fourth Avenue, Pittsburgh, PA 15222.

Two New State Record Striped Bass Caught in April in 9 Days

On April 3, 1986, David Zimmerman, of Patton, PA, caught a new state record striped bass in Raystown Lake while trolling a Cotton Cordell Red Fin. His fish weighed 30 pounds, 8 ounces, and measured 41½ inches long with a girth of 25¾ inches.

On April 12, 1986, Robert Albright, Jr., of Claysburg, PA, bested Zimmerman's 9-day-old state record mark by catching a 35.46-pound striped bass that measured 44 inches with a girth of 27 inches. Albright's striper, which he fooled with a bucktail, also came from Raystown Lake.

The former state record striper was caught only last April 27, 1985, also in Raystown Lake. That fish weighed 28 pounds, 11 ounces, and measured 41 inches long.

For complete details on the Fish Commission's Angler Recognition Program, which includes Angler's Awards, request the newly revised pamphlet on this subject from: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. With requests include a business-sized self-addressed, stamped envelope.

Permits for Private Markers, Aids

The number of floats, ski ramps, slalom courses, aids, markers, and other floating objects on Pennsylvania waters is increasing, but it is illegal to place these devices unless the Fish Commission authorizes their use and placement.

In accordance with current boating regulations, requests to establish private markers or aids on

Commonwealth waterways by clubs, individuals, state agencies,

municipalities, and other groups must be made in writing on Form PFC-277. Written requests must be made to the waterways conservation officer of the district in which the marker or buoy is to be placed.

Float permits (Form PFC-277) may be obtained by writing to: Fred Menke, Aids-to-Navigation Coordinator, P.O. Box 1673, Harrisburg, PA 17105-1673. The phone number is 717-657-4434.

Correspondence Tip

If you ordered subscriptions, publications, and other items from the Fish Commission, and if you need to correspond with the Fish Commission about your order, be sure to include in your letter the 7-digit number on the back of your cancelled check. This number appears directly below the stamp, "Pay to the order of the state treasurer."

Anglers Notebook Saw Everett

Are you after a big musky? The Allegheny Reservoir, Pymatuning Lake, Keystone Lake, Susquehanna River, and Allegheny River have harbored muskies big enough to qualify anglers to receive a Commission Senior Angler's Award (30 pounds).

Whenever dark mayflies are hatching, an Adams in the same size as the hatching mayflies will likely catch fish. When light mayflies are about, a Light Cahill is a good imitation.

Haven't had your fill of shad fishing yet this year? Depending on the weather and water conditions, look to the Pike and Wayne County portions of the Delaware for late-season shad action.

Write your fishing license number on your summary. If you lose the license, getting a replacement is a snap, if you know your license's original number.

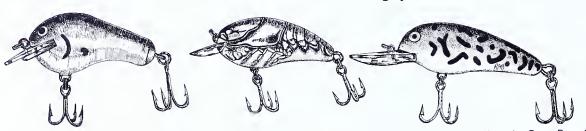
"Alphabet lures" include brand names such as Big Os, Bomber Model As, Killer Bs, and other similar lures. They are terrific walleye and smallmouth bass offerings in Lake Erie. If you don't have submersible trailer lights, be sure to disconnect the light wiring before you launch, and then after you retrieve your boat, remember to reconnect the lights before you hit the highway.

A deadly panfish rig consists of a 1/32-ounce or 1/16-ounce jig with a white or yellow action tail suspended from a bobber. Adjust the jig's depth and cast the rig to likely places. Use no action. Gentle wave motion gives the jig a tantalizing appeal that panfish—and gamefish—like.

Clear water and small streams are a combination that calls for a careful approach. Get down low as you get into casting position, and keep your fly from hitting the water during false casts.

Try several different retrieves for surface lures when bass fishing. Cast and let the lure lie motionless before twitching it, or on another cast, as soon as the lure lands, begin the retrieve. Both tactics can provoke strikes.

When you first arrive at a good fishing spot, work the water near you before you make long casts to other good spots. Good fish frequently lurk close to your initial casting spot.



illustrations by Rose Boegli

Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and the ideals of safe boating an optimum boating opportunities

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FERC Orders Shad Restoration Demonstration Program

The Fish Commission and the Susquehanna River Basin Commission announced recently that an administrative law judge of the Federal Energy Regulatory Commission (FERC) has issued an initial decision ordering the operators of Conowingo Dam on the Susquehanna River to participate in a program to demonstrate the feasibility of restoring American shad to the Susquehanna River. FERC Administrative Law Judge David Harfeld ordered on March 21st the construction of a new fish lift on the east side of Conowingo Dam, improvements to the existing westbank fish lift, and trapping and trucking of all adult shad captured at the expanded and improved Conowingo facilities. The decision is a major breakthrough in the efforts to restore American shad to the Susquehanna River.

Conowingo Dam is located in Maryland and is the first dam on the Susquehanna River. This 95-foot high hydroelectric power project blocks migration of American shad and other migratory fishes from the Atlantic Ocean and the Chesapeake Bay. The dam is operated by subsidiaries of the Philadelphia Electric Company.

In 1980, several natural resource agencies, including the Susquehanna River Basin Commission, Pennsylvania Fish Commission, U.S. Fish and Wildlife Service, Maryland Department of Natural Resources, and Pennsylvania Department of Environmental Resources, intervened in proceedings before FERC to urge that the operators of Conowingo Dam and three upstream dams cooperate to restore American shad to the Susquehanna River. In December 1984, the operators of the Holtwood, Safe Harbor, and York Haven dams signed an agreement with the agencies about their roles in a 10-year program to demonstrate restoration of shad to the Susquehanna.

Judge Harfeld's initial decision defines the role of the operators of Conowingo Dam in this 10-year demonstration program. The judge agreed with evidence presented by the natural resource agencies that the existing Conowingo fish lift, which was built in 1971 on the west side of the dam, is inefficient in attracting shad and other target fish. The judge ordered Philadelphia Electric to build a new fish collection facility and lift on the east side of the dam where shad congregate during power generation. His decision also requires improvements to the existing lift.

Fish Commission Executive Director Ralph W. Abele said, "Judge Harfeld's decision is a major step forward in our efforts to restore
American shad to the Susquehanna
River and its tributaries. The Fish
Commission was formed in 1886 with
the purpose of restoring migratory
fish to Pennsylvania's rivers. Today,
we are one important step closer to
reaching that goal. We urge the
Philadelphia Electric Company to
cooperate in the immediate
implementation of this initial decision
so that the demonstration program
can now go forward."

For more information, contact: Richard A. St. Pierre, Susquehanna River Coordinator, U.S. Fish and Wildlife Service, at 717-657-4547.



Drinking, Boating and the Law

Drinking, Boating and the Law is a new Fish Commission pamphlet that provides answers to the most commonly asked questions concerning boating and alcohol. For a free copy, send a self-addressed, stamped envelope with requests to: Boating, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

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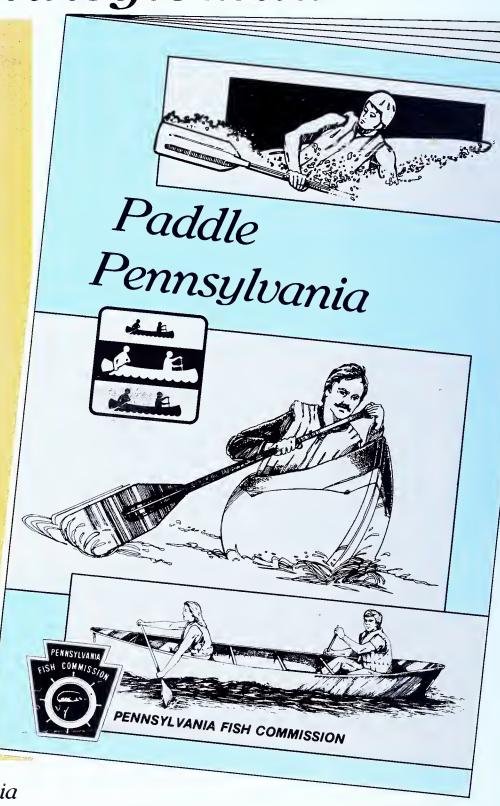
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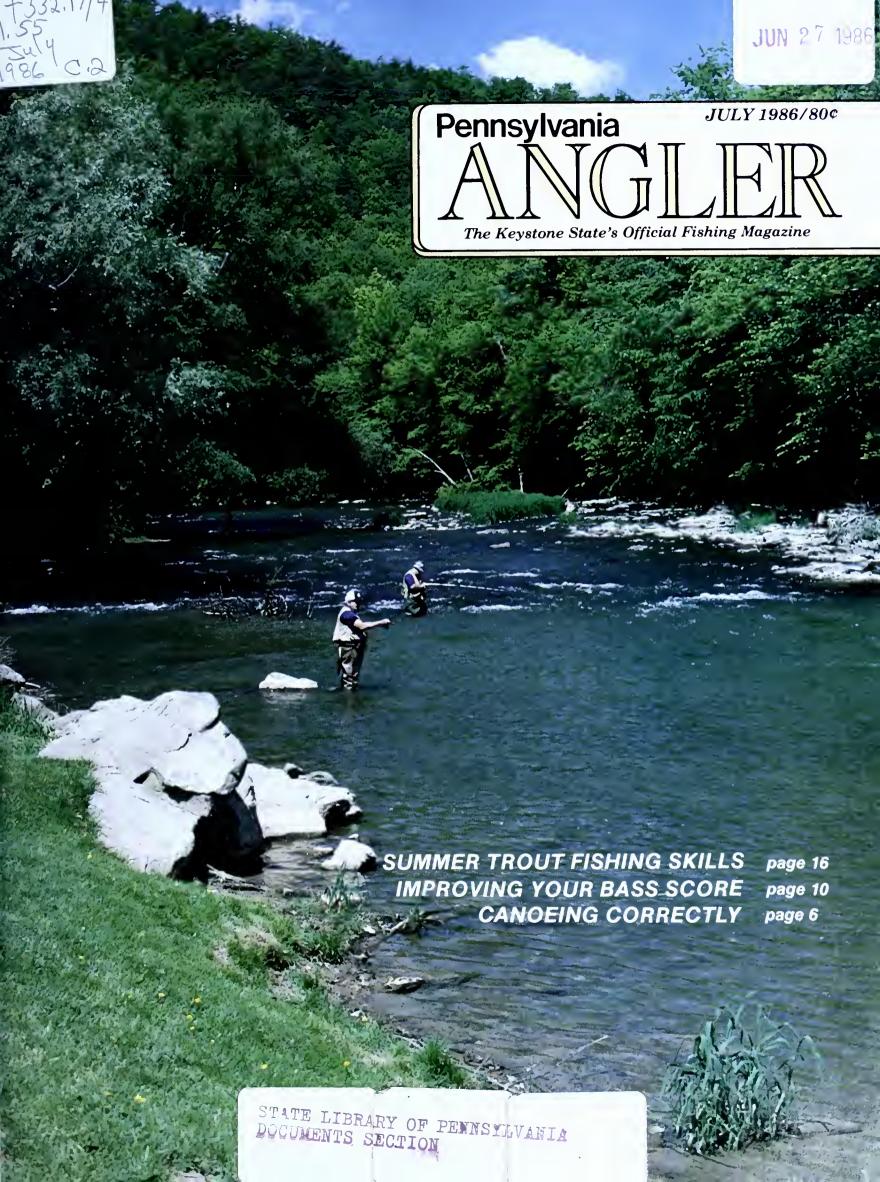
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Straight Talk

POPULATION CONTROL

In most environmental symposia addressing world problems, the problem of excess population is usually listed as the greatest of all. Yet the problem that arises from that problem is the world's greatest, and that is food. Currently, about onethird of the earth's population is in a state of starvation. With population increasing rapidly in those areas of the world which already have acute food shortages, by the end of this century it is very likely that greater numbersperhaps more than one-half of the people in the world—will be reduced to this condition.

Solutions to this problem are complex, but they do exist. We have the means of population control to zero growth, and we have the means and techniques for increasing food



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

production—at least to a limited degree. We have the means for a better worldwide distribution of existing food supplies, but the application of these solutions represents a gigantic challenge. Religious, national and cultural attitudes concerning population control are perhaps the most difficult to change—yet they must change.

Twelve years ago, at the World Population Conference in Bucharest, the United States took the lead, almost encouraging other countries to undertake programs of population stabilization. At that time, most of the Communist bloc countries opposed that position, as they were still operating under the theory of economic determinism, that growth in and of itself was good. The logic went: the more people, the better, and if countries simply followed proper economic policies they could accommodate all their population growth.

We have just come back from a fantastic vacation which circled the globe, and spent relatively short times in the People's Republic of China (again), the Soviet Union, Finland, Sweden, Norway, and Denmark. Differences in attitudes were quite dramatic. When the People's Republic of China was founded in 1949, the population was about 540 million. In old China, the birthrate was high, but so was the death rate, so that it took 150 years to increase from 200 million to 400 million. In the 1950s a growing economy and much wider access to medical care caused a rapid rise in the rate of population growth. Beginning in the 1950s, a baby boom doubled the population to 1.0347 billion by the end of 1984—this is 22 percent of the world's population. And of that total, 500 million were 22 years old or younger, or 63 percent under 30. Such a large proportion of the population in the child-bearing age would mean a whole new spiral of growth unless serious attention was given to family planning. This would put an enormous strain on China's resources. The amount of arable land

has shrunk to one-half of what it was per capita 30 years ago.

China's promotion of one couple, one child is a dramatic measure to cope with a particular situation.

Apparently the Chinese people have supported the goal of limiting growth, though, of course, a number would personally prefer to have two or more children. Bonuses are given to couples who pledge to have only one child. Those who ignore this policy are penalized by eliminating the food and housing allowance for the second child and others, and the wage earners are penalized about 30 percent of their salaries.

Moving on to the Soviet Union, which has the largest land mass under its jurisdiction in the whole world, childless couples are penalized with a 6 percent tax, and there is a tax on bachelor men (single women are not taxed). Scandinavian countries seem to have adopted self-imposed voluntary family planning for economic reasons.

The Third World—Latin America, Africa, and India—has serious problems, and these affect American citizens as well as everyone else in the world. It took the world a whole century to add its second billion; now the world is adding its fifth billion in just 10 years. It's not only the number of people that causes the problems. It's also the growing number of things each person needs or wants which affects the environment. This is especially true in the affluent nations where wasteful use of resources magnifies the impact of population growth. A hungry person couldn't care less about killing game in a protected area, fishing in an overfished lake, or cutting firewood on a steep slope. What's especially important to one concerned about the world's environment is the day-to-day living environment of those struggling to stay alive.

Whether our most urgent concern is peace, freedom, the food supply, civil liberties, the environment or social justice, it is a lost cause unless the population of the world is stabilized.

Falph W. Phele

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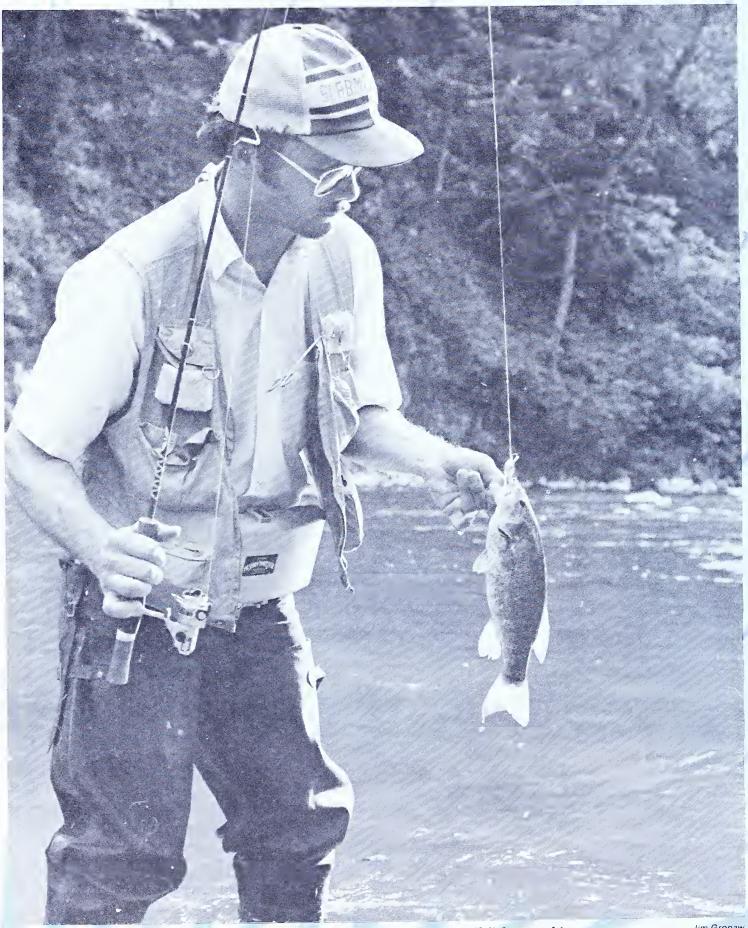
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The cover

This month's front cover, photographed by staff photographer Russ Gettig, shows anglers trying their luck in Penns Creek, near the border between Centre and Mifflin counties. Along these lines, if you'd like to improve your trout fishing score this summer, the information in the article that begins on page 16 could help. Bass fishermen may want to read the article that starts on page 10, and boating anglers will want to see the articles that begin on pages 6, 14, and 18.

Get Set for Ultralight Spinning



Ultralight gear is much more than featherweight play-toys to make small fish seem big.

Jim Gronaw

by Jim Gronaw

any anglers view ultralight spinning gear as nothing more than a lightweight play-toy invented for the sole purpose of making small fish seem big. True, miniature rods and reels were initially designed to put sport back into panfishing. But today's midget spinning gear has come a long way in the last 10 years. Rods are now short and light yet strong with the backbone to handle larger game and offer plenty of sport to land spunky, pound-sized bass and trout. Reels have smoother drag systems and are tough enough to subdue very large fish. Yes, ultralight—UL—spinning gear is a worthy gamefishing tool.

Advantages

Besides the obvious fact that UL gear offers a sporting match for panfish enthusiasts, it has other strong points as well.

Anyone who has ever tackled trout fishing in small, brush-lined creeks knows full well the advantage of ultralight gear. Heavily vegetated banks make fly rodding difficult, sometimes impossible. But the shorter, five-foot spinning sticks are ideal for tossing near-miss shots to pocket water, shaded undercuts, or riffles in quest of brookies, browns, or rainbows. Accurate casts must be made under these close-quarter conditions, and ultralight spinning gear fits the bill perfectly.

Another plus is the sensitivity offered in graphite and boron rods. Certain angling situations demand a "feel" for the strike, such as worm fishing for largemouths, jig fishing for crappies, or bait fishing for trout. If that delicate "tap" isn't telegraphed to your hand from the rod tip, then you'll miss many strikes. Today, ultralight rods are excellent indicators for light-striking gamefish.

Probably one of the best aspects about midget spinning gear is that it can be used to teach youngsters. A child may have difficulty handling medium to heavy spinning gear, but the scaled-down proportions of the miniature spinning versions are ideal for young anglers to help get their timing down and develop good, basic casting skills. As an instructional tool, it is ideal, and it's certainly one of the most enjoyable ways to fish.



Rod types

Basically, ultralight rods are made of either fiberglass, graphite, or graphite composites, which have a combination of both of these fibers. Some top-of-the-line models are constructed of boron, the most sensitive rod blank material.

Fiberglass sticks are the least expensive and many models offer very good performance. A good glass rod should not be too "whippy" or possess a horseshoe arc every time you set the hook in a fish. A soft rod causes a lot of missed strikes, has insufficient backbone, and offers little in the sensitivity department.

Instead, choose one that recovers quickly to a wrist snap and can detect light strikes at the tip. All of today's manufacturers make good glass rods.

For most ultralight situations, a graphite or graphite-composite rod is all you'll ever need. Composite models are generally made of 90 percent graphite and are nearly as sensitive as 100 percent graphite rods. For the money, graphite and/or composite sticks are the best bargain, offering sensitivity, light weight, and strength with backbone. Super-sensitive boron sticks offer the ultimate in ultralight, but are not a necessity for enjoying this sport.

Rods should be from 4½ feet to 5½ feet long and be one-piece for better casting action and feel. I prefer ceramic single-foot guides on my miniature sticks, but some models may have "snake" style guides on them. Ceramic guides are easier on the light monos you use and are preferred over stainless steel guides. Another good feature to look for is cork grips with sliding rings so that you can attach your reel precisely

where you want it, rather than on a fixed reel seat.

Reels

Just about everybody has a line of ultralight spinning reels to choose from, and most companies make quality instruments. Look for one that weighs between six and eight ounces and can spool at least 100 yards of 4-pound test.

A rear drag adjustment system is a good feature to look for, but many mini-reels have spool-tightened drags. Either will do, and the choice here is strictly up to the individual. Bail mechanisms should work smoothly and crisply with no hesitations on the flip. External or internal tripping systems for the bail are again a matter of personal preference. Lately, I've become fond of the external tripping systems on today's midget reels.

Of course, you must spool your reel with quality monos testing 2, 4, or 6-pound test. Remember, light lines take a lot of wear and tear and if a good fish is hooked, you want every advantage on your side. Never use cheap lines.

Lures

Once you have your ultralight in hand, you'll need a selection of fish getters for a variety of situations. Midget-sized crankbaits should measure 1½ inches to 2½ inches long and color patterns such as crayfish and perch are excellent producers on bass streams. Slim-line minnow imitations (Rebels and Rapalas) are also top creek lures. Both floating and sinking models do well.

Small spinners are excellent ultralight ammo, too. Both Panther Martin and Mepps make lightweight lures that accurately resemble baitfish. The new Mepps "00" sized spinners are the smallest in-line spinners made and are very effective on big panfish.

Probably the best all-around lures for the ultralight angler are marabou and twistertail jigs. With twisters now produced in such a variety of colors, it's hard to pinpoint the best. However, black, white, chartreuse, smoke, purple, and blue get their share of fish. Work twistertails on 1/64-ounce to 1/16-ounce jigheads for panfish and bass, but don't be surprised if much larger game takes your offering.

Paddle Your Own Canoe... Correctly

by Cliff Jacobson photos by the author

omewhere among the pages of every elementary canoeing text you'll find these time-worn admonitions: 1) Be careful when approaching rapids and falls; 2) Don't paddle dangerous waters until you've had some experience.

Caution and experience—sound advice for a safe, event-free canoe trip. Don't you believe it!

Some years ago, I helped rescue two canoeists who had inadvertently paddled over a 12-foot falls (they survived but their canoe didn't). The conversation ran something like this . . .

"What happened?" I asked. "Didn't ya see the falls?"

"Yeah, we saw it . . . George yelled 'go right,' so I ruddered hard and poured on the coal. The rest is history."

"Hmmm, is this your first canoe trip?" I questioned.

"Nah . . . first time here . . . me'n George paddle a lot together."

"How much is a lot?"

"Uh . . . three, four trips a year. We been canoein' together since we were kids."

About that time, good old George, whose posterior was precariously perched over our campfire, sheepishly mumbled something about "experience not being the best teacher."

There was no need for further comment.

Here we have a classic example of a canoeing accident that could have ended in disaster. Both men used caution when they approached the falls, and by their admission, they were experienced.

Their problem was that they "didn't know how to paddle!" For a decade they had repeated the same errors

with no bad effects. Then came the falls

As the case in point illustrates, simply paddling a lot will not teach you the correct way to canoe. What will is an understanding of the basic strokes.

It is with these thoughts that I offer this primer on the paddling arts. If you're new to canoesport, you'll master everything here in a day or three. But if you've been doing it wrong for years and have a lot of bad habits to break, it will take much longer.

Here are the basic strokes.

Forward (used in bow or stern)

Here's a stroke everyone knows, or thinks he knows. Just dip the blade in the water and pull back, right? Well, almost. Fact is, the forward stroke is so sophisticated that canoe racers spend a good part of their lives attempting to master it.

Granted, anyone can paddle forward without instruction, but most do it inefficiently. A few moments spent in a racing canoe with a pro will instantly dispel any illusions of simplicity you may have about this stroke.

Begin the forward stroke as close to the canoe as possible, and as far forward as you can reach, without lunging. Keep your top hand low below your eyes, and push! Most of the power is in your top hand; your bottom hand functions mostly as a guide.

Pivot your shoulders with the stroke so that the paddle comes straight back, parallel to the keel. Do not follow the curve of the gunnel. When your lower hand reaches your hip, take the paddle out of the water and begin a new stroke.

Bringing the paddle farther back than necessary wastes energy and power, and in fact, slows the canoe. This is because a paddle blade that's brought beyond vertical, pushes water up, which forces the canoe down into the water and slows its speed. That's why bent paddles—those with blades angled forward about 14 degrees—are more efficient than straight ones. At the end of the stroke the angled blade points straight down. No water is raised and no forward speed is lost.

Return the paddle to its starting position by feathering the blade parallel to the water. This step is especially important when you're paddling into a wind.

The most common mistake beginners make is to paddle across their bodies. The paddle shaft must be perpendicular to the water, not at an angle to it.

Back stroke (used in bow or stern)

Most canoeists learn this stroke out of necessity when a huge rock looms ahead. It is one of the earliest strokes taught—and perfected—in whitewater canoeing.

Rotate your shoulders and begin the stroke as far back as you can. Use a levering action of your arms and pull the paddle through the water. Beginners will attempt to bring the paddle shaft across their bodies, which halves the energy of the stroke. The paddle must be dead vertical, as illustrated.

Whitewater paddlers prefer an alternate form of this stroke which is nothing more than a "draw" stroke applied parallel to the keel line.

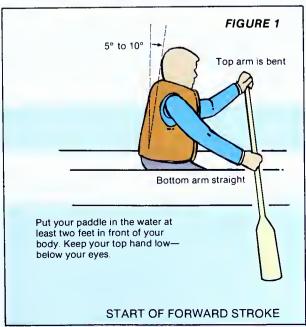
Procedure: Twist your shoulders a full 90 degrees to the right or left, and look toward the stern of the canoe. "Draw" water forward, toward the bow. This "back draw" is extremely powerful and blends instantly into the conventional draw, which is essential for correcting the ferry angle of a canoe in a strong current.



Draw (used in bow or stern)

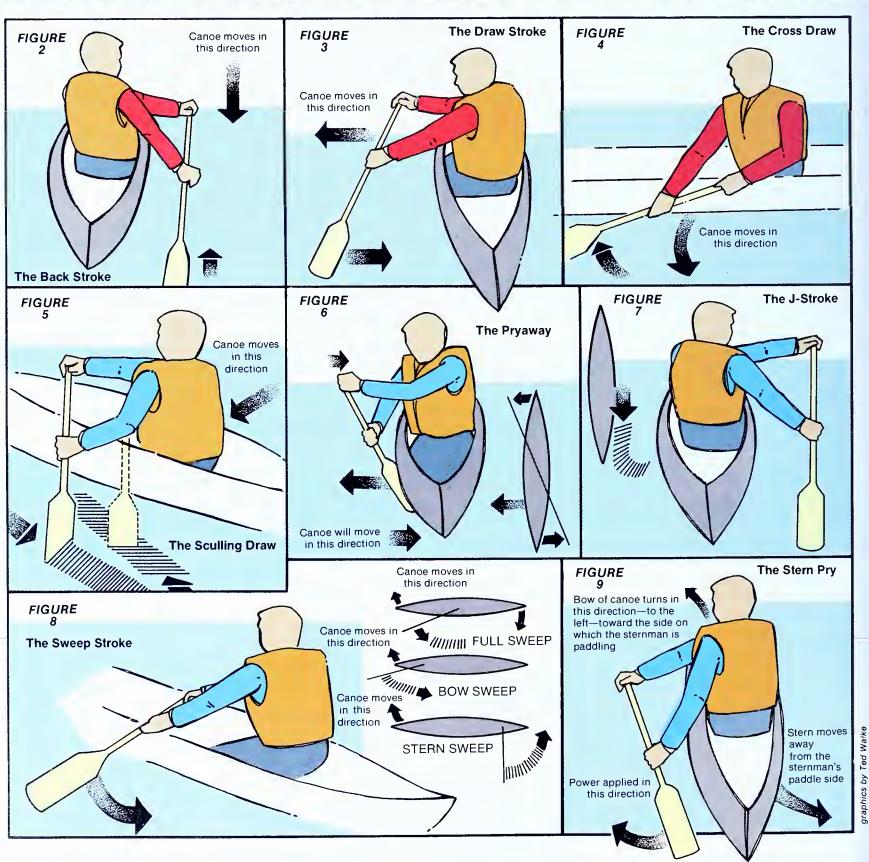
Old canoeing publications recommend the "bow rudder" for turning toward the paddle side. Now this stroke has been replaced by the much more powerful "draw."

For maximum power and stability, the draw should be executed from a kneeling or well-braced sitting position. Reach as far out over the gunnel as you can (it's okay to bring your top hand over your head), and power the paddle inward, forcing water under the canoe. When the paddle comes to within six inches of









the hull, slice it out (backwards and up) and "draw" again.

The continuous power of the draw has a righting effect on the canoe, it makes it almost impossible to capsize. However, once the power is released, you're at the mercy of gravity, so be sure your weight is well-centered in the canoe when the stroke is completed.

Cross draw (use in bow of canoe only)

Basically an adaptation of the old "cross-bow rudder," it is nothing more than a draw stroke crossed over the bow of the canoe. Pivot at the waist, bring your paddle across the bow, reach far out . . . and "draw." The canoe will turn smartly toward the paddle side.

The cross draw is a solo or bow stroke only. It cannot be done in the stern of a tandem canoe. It is extremely powerful; when coupled with a strong "stern pry," the canoe will literally pivot on its mid-point. The cross draw is also safe, as its shallow-running blade cannot catch on rocks and upset the canoe.

Sculling draw (useful in bow or stern of canoe)

The sculling draw is used to move a canoe sideways in water too shallow to effect a good draw. It is also a nice stroke in "heavy water" (powerful waves) because it has a strong bracing effect.

The sculling draw is hard to describe, easy to do, and fascinating to watch. Perform this stroke in front of onlookers and you'll instantly attain expert status.

Procedure: Place the paddle blade in the water a comfortable distance from the canoe and about two feet forward of your body. Rotate the leading edge of the paddle (normal power face of the blade) 45 degrees away from the canoe, and while maintaining this blade angle, pull the paddle backward. At the end of the stroke, rotate the leading edge of the blade a full 90 degrees, and using the same power face of the blade, push water forward. The canoe will scoot toward your paddle.

The sculling draw is sometimes called the "figure-8" stroke because the paddle describes this number as it is pulled through the water. That's not quite correct, however; the path of the

blade is nearly parallel to the keel line of the canoe.

Pry—pryaway—(used in bow and stern of canoe)

The exact opposite of the draw. Begin the stroke under the bilge of the canoe and lever the paddle blade smartly outward, using the gunnel or bilge for leverage. Use an underwater recovery for this stroke. The mechanics of this stroke will be obvious once you've tried it.

Personally, I don't like the pry because it is very hard on paddle shafts and gunnels. Like the draw, however, the pry has a strong bracing action during the power phase. For this reason, it is preferred over the cross draw for turning the canoe in heavy rapids.

Warning: Don't use the pry in shallow water. The paddle blade might catch on a rock and capsize the canoe.

J-stroke (used in the stern only)

Beginners instantly learn that canoes don't paddle straight unless they are "ruddered." A canoe moving forward veers away from the stern person's paddle side. Put it in reverse and the opposite applies.

The traditional way to correct the problem is by use of the J-stroke. Begin the J as a typical forward stroke, but shortly after the blade enters the water, start turning the thumb of the top hand down, away from your body, which will change the pitch of the blade. Continually increase the amount of pitch so that by stroke's end the blade is in a rudder position, thumb of the top hand pointing straight down. If additional correction is necessary, a slight outward pry (J) will do the trick. The more pry, the greater the correction.

There are variations on the J. Some paddlers begin with a conventional forward stroke and then finish with a violent outward kick. Others use enough pitch throughout the stroke so that no outward thrust is necessary. And whitewater folk who scorn tradition and style simply use a standard "forward" stroke and end it with a "stern pry."

When going backwards, the bow person has the most paddle leverage and so should use the "Reverse-J" to correct the course.

Minnesota Switch or "Hut" Stroke (used by both partners simultaneously)

The Minnesota Switch or Hut stroke was first used in the 1940s by Eugene Jensen and Tom Estes to win a series of canoe races. Instead of using the conventional J-stroke to maintain a straight course, Gene and Tom simply switched the paddle sides on cue. Every six to eight strokes, Tom would yell Hut, and the two would trade sides. Over the years, the stroke grew in popularity until today it is the preferred method for traveling fast. Virtually every competitive canoe racer uses it, to the complete exclusion of the J.

The Minnesota Switch is very efficient—just what you need for trucking into the waves of a wind-tossed lake. But the stroke is ugly and boring and the canoe describes a somewhat erratic path through the water. For this reason, traditionalists scorn the Minnesota Switch and refuse to use it.

Sweeps (bow or stern strokes)

Sweeps are useful in flat-water maneuvers for turning the canoe in a graceful arc. But compared to the powerful draws, cross draws, and prys, they are very inefficient. Nonetheless, they are part of the canoeing repertoire, reason enough to learn them. The diagrams are self-explanatory.

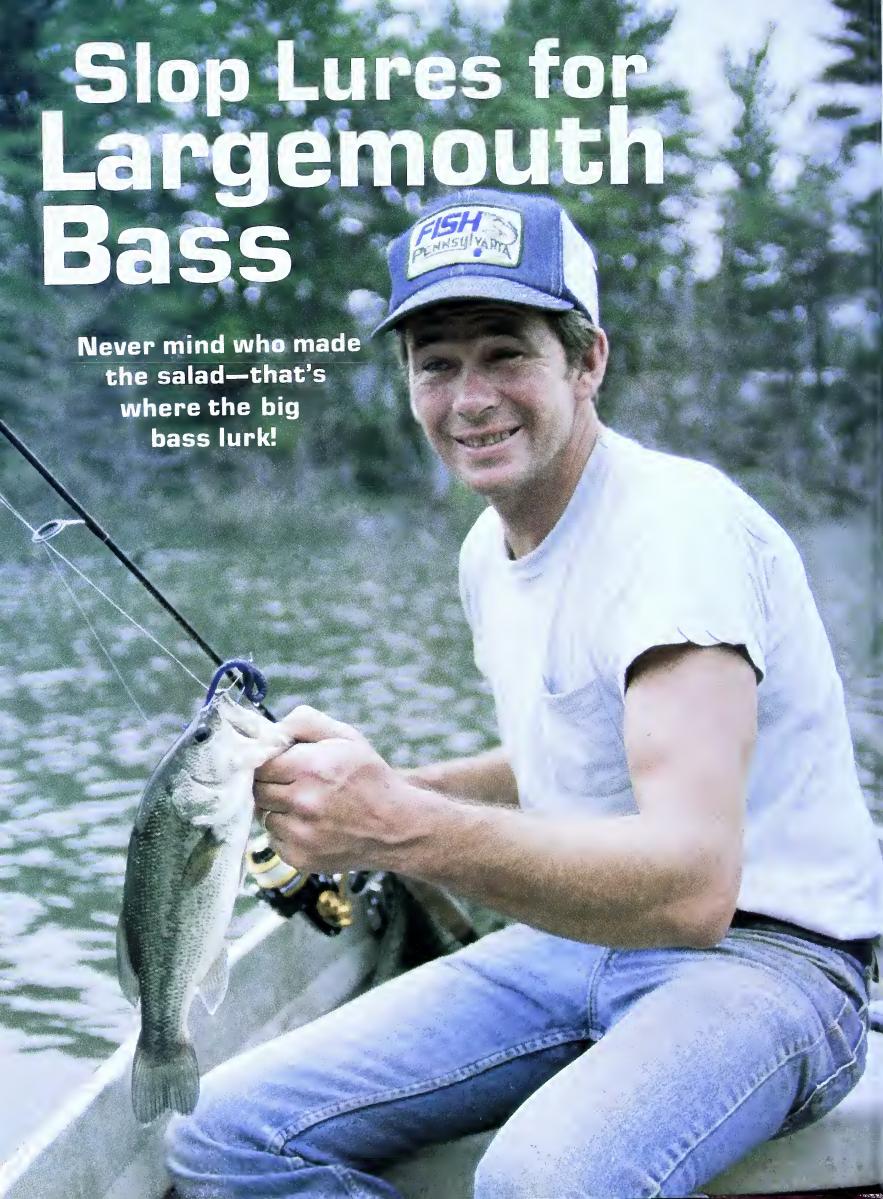
Stern pry (stern stroke only)

Similar to the reverse stern sweep except that only the outward portion of the arc is completed.

For greatest leverage, begin the stern pry as far back as possible. Thrust the blade outward with a snappy levering action of your arms, perhaps prying the paddle shaft off the gunnel or your thigh (if you're seated). Combine this stroke with a powerful cross draw at the bow, and the canoe will pivot on its midpoint. The stern pry is a most essential stroke in flat water or in white water.

PA

Cliff Jacobson has 33 years of canoeing experience and is one of the foremost canoeing experts in America. He is the author of three canoeing books, the newest of which is Canoeing Wild Rivers, published by ICS/Stackpole.



by Mike Bleech photos by the author

ass don't get fished out from the slop. You can bet that there are some largemouths lurking in the thickest cover of your favorite bass lake. The reason is simple—most anglers don't have the patience to fish the stuff! Even if you have the tools and the knowledge to use them, your lures will get hung or covered with goop on a large share of your retrieves. You will catch bass from the slop, though, if you can put up with the aggravation!

Slop is thick, matted plant matter. It occupies shallow water in many bass lakes, occasionally extending out to the depth of about 12 feet. Pondweeds, arrowheads, duckweeds, water lilies, coontail, and water milfoil are representative of the plants that may meet the definition of "slop." The real nasty stuff includes a coating, and in some cases thick mats, of filamentous green algae.

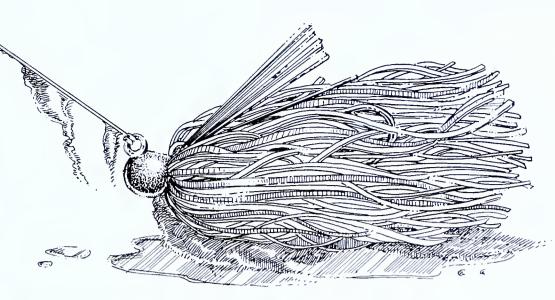
Cast a standard bass lure into slop and it will simply stick where it lands. Most anglers consider the stuff unfishable. You cannot run a motor through it, nor even row through it. A push pole or paddle is the best way to get around in it. The relatively new weedless propellers for electric motors will get through some slop, though certainly not through heavy slop. Shallow slop can be waded, but don't venture far before getting the hang of it. Float tubes will get through some of it, but legs can get hopelessly tangled. Tubers should carry takedown paddles or telescoping push poles.

You can imagine—if you have not already tried it—how hard it is to drag something with a hook on it through slop!

Lures

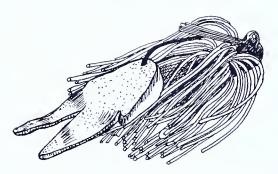
What is a slop lure? A slop lure is anything that can be effectively fished in the slop.

Many lures have been designed for slop use. None of the multitude that has passed through my tackle boxes has been truly "weedless." Still, considering the task they must perform, there are some very good slop lures. Among them, two





One of the reasons that heavy gear is needed for slop fishing is that you may be hauling in more than just a bass.



characteristics are nearly universal: streamlined shape and a minimum of hook points.

The first thing to do when designing a slop lure is to limit it to one hook point. As a matter of fact, some standard bass lures can be modified for slop use by taking off all treble hooks and replacing them with single hooks. Weedguards are often added to keep the hook from snagging on weeds. This is part of the streamlining.

Streamlining does not mean that all slop lures are shaped like bullets, rockets, or fancy cars. It means that there are no protrusions to catch in the slop. Exceptions occur on many slop lures, but these trouble spots are kept to a functional minimum.

Many slop lures are surface runners. The reason is that it is impossible to retrieve a lure right through the midst of thick slop. Fortunately, bass using slop for cover seem particularly susceptible to surface presentations. Bass are probably accustomed to eating small creatures, such as shrews, frogs, or insects, which walk on the surface of thick slop.

Some surface lures are imitations of critters that naturally occur on the slop surface. Even though the life-like appearance of these imitations is probably more attractive to anglers than to bass (at least, folks who sell these lures hope so), most are very effective lures.

Presentation

Presentation of slop lures, in keeping with the spirit of imitation, is typically slow. Proper use is best accomplished by mimicking the action of the critter that the lure represents. Basically, this is a series of scampers across open pockets and pauses between.

Open pockets are key locations, because bass need room to maneuver. The open pocket need not be revealed at the surface. It is common for floating weeds to cover open pockets, and bass eagerly smash a lure running through the floating plants. Also, open water occurs in degrees—as long as the bass can see and move about, it is open.

The imitative approach sounds good and looks good, but it is often less productive than a noisy surface lure. Visibility is poor in the slop, and in all likelihood, slop muffles sound under water. Loud surface lures may attract bass from 20 feet away, as evidenced by the wakes of attacking bass. This is one of the thrills of slop fishing, as the angler awaits the union of lure and onrushing bulge in the water.

A third type of slop lure is the group of sinkers. Currently, the most popular example of this bunch is the jig and pig. Texas-rigged plastic worms are another example. These lures are tossed (flipped) into open pockets and allowed to sink to the bottom on a slack line. This offering could represent a frog swimming to the bottom or some hapless creature that has fallen into the water.

Most hits come as the lure is falling. These strikes may be difficult to detect, so a sensitive rod is a great asset.

Do not be in a hurry with a sinking slop lure. Once it reaches bottom, let it rest there a few seconds. Then wiggle it. This is done by wiggling the rod tip. Practice this in clear water until you can make the lure wiggle without lifting it off the bottom. This maneuver is difficult, but it will catch some bass that would otherwise be missed.

A fourth type of lure is the sinking surface slop lure. These lures, the most popular slop lures before the fad of flipping with jig and pig, can be retrieved across the surface, but sink when not in forward motion. Some fine examples are the Skitter Buzz, Johnson Weedless Spoon, Barney Spoon, and Mepps Double Cross.

Sinking surface slop lures are the fastest way to cover slop water thoroughly. The key word here is thoroughly. Do not let this relatively fast presentation lull you into a less-than-meticulous approach! Vary the retrieve until a pattern develops. Likewise, try loud lures like the Skitter Buzz and quiet lures like the Barney Spoon, and vary the colors.

Standard slop lure colors—in all

lure types—are black, yellow, silver, and gold.

There is a trick to getting a lure through slop without picking up bits of weed. Unfortunately, it is not the kind of thing that can be described so that everyone can grasp it. Roughly, it involves wiggling the lure by shaking the rod as the lure is passing through weeds. Knowing when to wiggle and how hard to wiggle is the tricky part!

Sometimes a lure can be ripped through weeds. This is done by giving the rod a sharp jerk. The jerk must be fast and powerful, yet under control so that the lure does not come flying out of the water.

Tackle

Slop tackle should be stout! Snags are common, and the ripping maneuver takes strength. A hooked bass is almost certain to tangle the line in the weeds. Use line testing at least 14 pounds. The rod should be medium-heavy to heavy bass action.

One of the basic pleasures of sport fishing is battling a fish with a flexing rod. Ultralights and fly rods take maximum advantage of that pleasure. Slop fishing is the other end of the spectrum. The idea with slop fishing is to expedite the bass out of the slop! The slack that a bass can get from a limber rod could be all it needs to get hopelessly tangled. Don't worry, the stiff rod will not take all the sport out of this kind of action.

Short casts are the rule when fishing the slop for the same reason. Also, lures almost certainly get hung or coated with weeds before long casts can be retrieved. Short, accurate casts yield the most productive lure-in-thewater time. Flipping exemplifies this line of thought by keeping the rod tip close to the action.

As with most challenging fishing situations, there is a "feel" to slop fishing that is necessary to becoming proficient. The feel is knowing, for example, when to wiggle a lure through the weeds or when to rip it. Feel is knowing when to pause a lure. Feel is many other things that must be learned through patience. It is doubtful that anyone could love to fish the slop without first developing a feel for it!

But once you develop these skills, you'll relish the thought of hauling lunkers from the slop.

DOWNBURSTS ARE DANGEROUS

he lightning, rain squalls, and heavy winds that accompany thunderstorms present multiple hazards to boaters. Boaters face still another risk from a weather phenomenon known as a "downburst."

The wind forces of a thunderstorm are shown in the illustration. There are four main forces at work in this storm: updrafts, downdrafts, downbursts, and the gust front.

Downbursts have been investigated recently by researchers led by Dr. T. Theodore Fujita of the University of Chicago. Recent findings show that downbursts are responsible for many tragedies in both aviation and boating. Sudden wind shifts are encountered by boats in the path of a downburst. Such wind reversals have killed people as boats were capsized and destroyed.

Dr. Fujita describes downbursts as either "microbursts" or "macrobursts." Microbursts cover an area less than four kilometers in diameter. Macrobursts affect areas up to ten times as large. Downbursts can be understood by considering the forces at work in the thunderstorm.

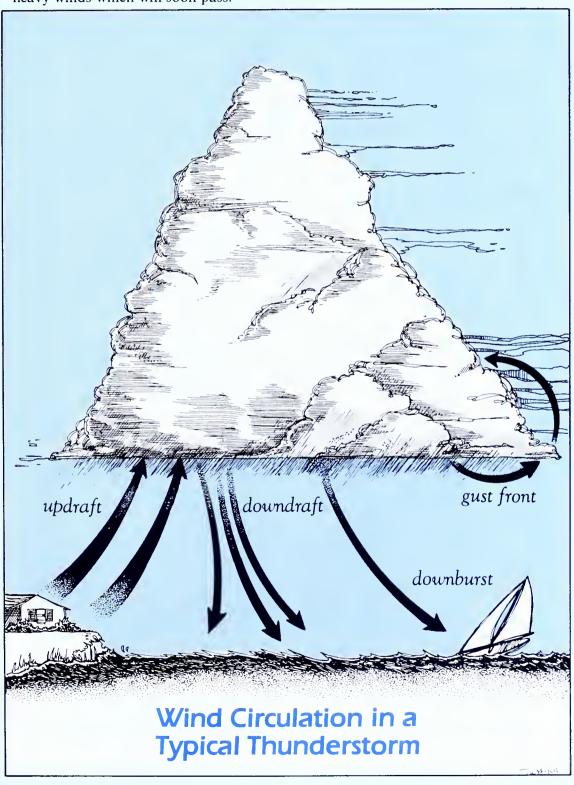
Within the huge thundercloud there are rising currents of warm air called "updrafts," falling masses of cool air called "downdrafts," and "downbursts" of cold air spilling out at high speeds of up to 130 miles per hour as air pours from the bottom of the cloud and rapidly fans out along the surface of the earth. Gust front winds, which range up to 40 miles per hour, precede the thunderstorm.

Thunderstorms typically produce several downbursts in succession, of varying powers and dimensions. Downburst winds can be as great as those of strong tornadoes and may produce a "roaring" sound. Frequently, damage that is attributed to tornadoes is actually caused by the straight winds of a downburst.

At times, a thunderstorm may produce a combination of tornadoes and downbursts. Dr. Fujita refers to microbursts as "upside-down tornadoes." It is most important that boaters respect downbursts just as much as they respect the hazard that lightning presents.

Microbursts can occur with rainstorms that are not accompanied by thunder and lightning. This situation is more of a hazard to aircraft than to boats, but boats under way could encounter a microburst formed by a rain squall without a thundercloud. Microbursts are short-lived, and probably die within 10 minutes. Thus, the skipper can steer the boat to withstand the heavy winds which will soon pass.

Boaters can get up-to-date weather forecasts for their area by listening to the National Oceanic and Atmospheric Administration weather radio station or most commercial AM and FM radio stations. However, not all thunderstorms can be predicted. Each skipper must be aware of local weather at all times. A smart skipper can turn the boat around and head for safe harbor.



Take a Spare Everything



by Gary Diamond

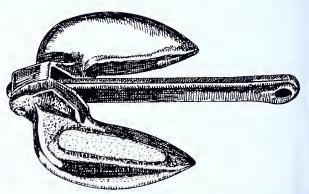
ust three decades ago, the only safety devices on a boat were items you thought may get broken or lost—spare oars, Mae West life jackets, and possibly a spare anchor. Due to the nature of boating during that era, you seldom lost sight of land and the only means of propulsion were arm and oar power. You were confident you could handle any situation that could possibly be dangerous to you or to your passengers.

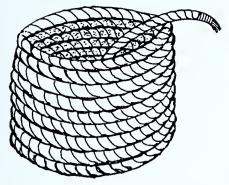
Modern technology has changed boating considerably. Boats are faster, engines are more powerful and complex, and traveling several miles over water to your destination is something we take for granted. Although boating laws don't require having spare accessories onboard, they should be a part of your everyday boating items.

About three years ago, I took a trip to Conowingo Lake and launched my 12-foot johnboat at the Fish Commission's Muddy Creek Access. After checking that everything was onboard and ready to go, the boat was launched and I headed out for an afternoon's fishing. Shortly after launching the boat, I noticed a small runabout drifting downriver. One of the occupants was waving his arms frantically.

"Can you give us a tow?" asked the operator of the boat as I eased closer. "Sure," I replied as I tossed him a rope.







"Just tie this to your bow cleat."
Ten minutes later we were back at the launch ramp and the hapless boater loaded his runabout on a trailer.

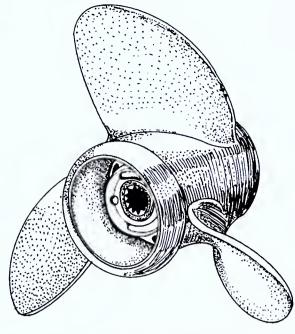
I learned that he had broken a prop by striking a submerged rock in the upper end of the lake. He didn't carry a spare anything on his boat, let alone a prop. In fact, he didn't have an anchor, flares, horn, whistle, tool box, life jacket, or radio. Had the boater gone unseen while in this dilemma, he could have ended up crashing into the spillway at Conowingo Dam, and could possibly have lost his life. Additionally, this guy had never been on Conowingo Lake and didn't have any idea what the water depths were and what hazards were hidden beneath the surface of the swift water.

The old saying, "An ounce of prevention is worth a pound of cure" really strikes home when it comes to boating safety. My brother recently acquired an old 32-foot cruiser. After months of restoration and working on the engines, he decided to take the boat out on the river where it was moored. He had really done an excellent job of restoring the old wooden craft and was anxious to see how fast those twin engines would push it.

Just five minutes from the ramp, both engines began running rough and stopped. After 15 minutes of futile effort, the engines still refused to start as the boat drifted toward a railroad bridge. He didn't have an anchor, flares, or radio to aid him. Fortunately, the incident occurred on a busy weekend in an area where he could flag down another boater for help. A clogged fuel filter had shut off all fuel flow and could have cost him his boat had it struck the bridge.

Prop, anchor

Nearly every boater carries a spare life jacket, but how about a spare prop? This is one item that should always be onboard your boat—they are easily damaged or broken and can be quickly replaced.



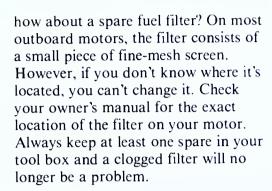
Also, you should have the proper tools to change the propeller and practice changing it while in the boat. This job should be done in shallow water just in case you were to drop something overboard. Additionally, spare shear pins and cotter pins should also be part of those tools.

An anchor is also a necessity. However, no anchor is required by law, and few boaters bother to carry a spare. But if you were to lose your primary anchor while on the water, that second anchor could be a lifesaver in the event of an engine failure. Naturally, the anchor would be absolutely worthless without rope, and this too should be carried as a spare.

Spark plugs, fuel filter

The very nature of two-cycle engines, those that mix oil with the fuel to lubricate moving parts, is such that spark plugs will foul. A complete set of spark plugs, properly gapped, should be included in your tool kit. Changing spark plugs on any outboard or 1/O is a simple task and should be done routinely. Changing them while bouncing around in a boat is a bit more difficult, but it can be done safely, and may need to be done, if you have the proper tools.

Everyone takes a spare fuel tank just in case you run out of gas, but



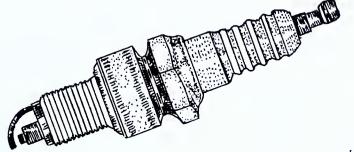
Fuel connectors

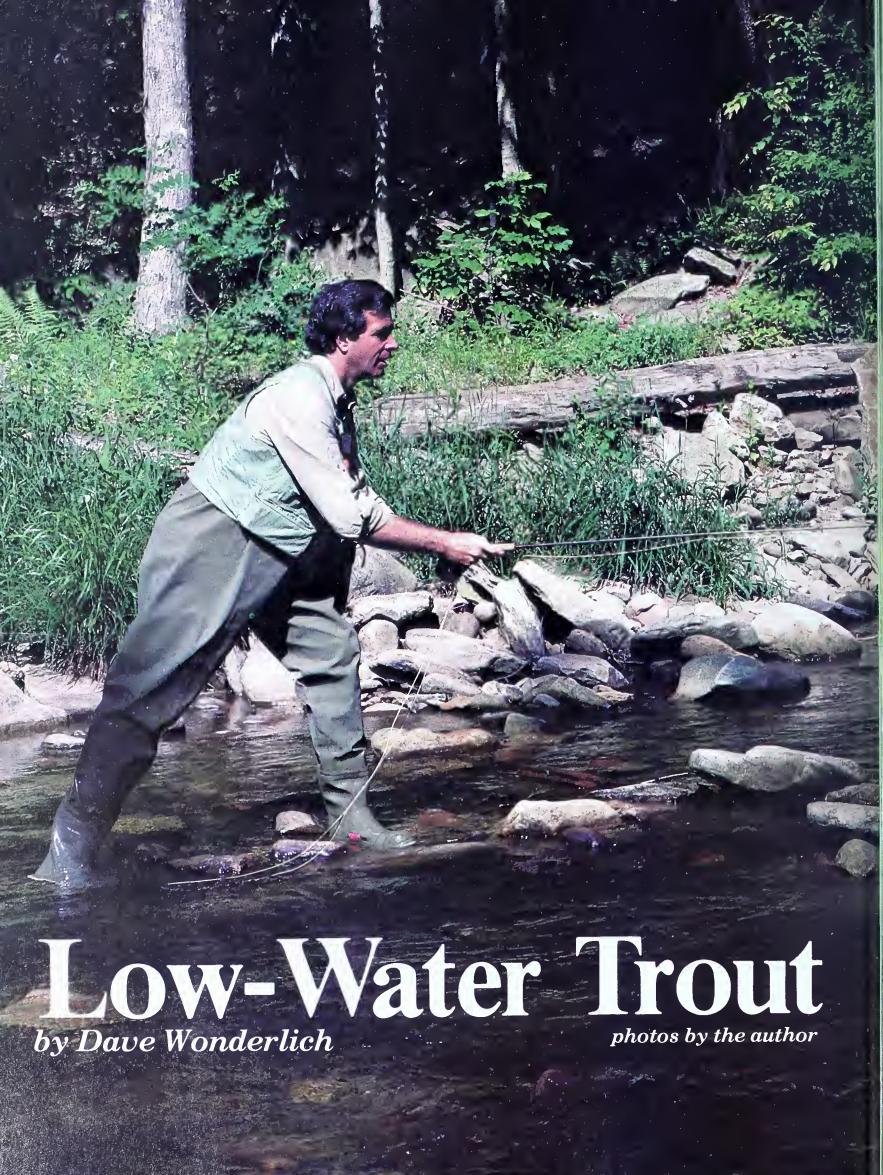
Fuel connectors are sealed with a small rubber "O" ring, which eventually cracks or wears to the point of leaking. Rarely do these devices leak fuel, but they do allow air to enter the fuel line, which will prevent the engine from running.

Carry at least two spare connectors and a spare priming bulb—they too have been known to fail when you least expect. In fact, if at all possible, carry a spare fuel line assembly and you'll have all those components in one unit and won't have to do any assembling that could result in a gasoline spill.

I also highly recommend installing a VHF or CB radio on all boats. It's rare indeed that you can't summon help over the radio, regardless of your location or situation. The radio also allows you to maintain constant communication with rescuers. Check the radio frequently to be sure it's operating and store it in a dry place to prevent damage from moisture.

What spares should you have on your boat? When you've been boating for many years, you soon realize that Murphy's Law prevails when you're on the water. Carry a spare everything and you'll be ready for the unexpected.





y the time midsummer rolls around, most freestone trout streams are low, slow, and clear. Shallow stretches that held trout only a few weeks earlier are now void of cold-water battlers. Other stream areas may also appear to be fishless because seeing the fish usually means that they can see you too . . . and they have already gone for cover. Many anglers combine these skill-testing facts with the idea that most of the trout were caught earlier in the year, and they decide to hang up the trout equipment for the summer.

Granted, stream conditions are lower at this time of the year, and the trout are well-educated and spook easily, but the angler who uses these facts as a basis for fishing strategy can have the most interesting and exciting trout fishing of the year.

The low water is not a detriment, it only dictates the need for a careful and well-planned approach to the stream, an idea of where the trout will be holding, a slight change in terminal tackle, and a delicate presentation of the lure. Once an angler changes his style and tries for trout among the small runs and pools and catches that first fish, the advantages of fishing during the low stream conditions quickly become clear.

Unlike earlier in the season when the fish are spread throughout the high water, their location in the stream is now easily determined. They will be congregated in the only spots that are viable for their survival, and they will wait for any and all food that the current brings them. The advantages far outweigh the task of developing new tactics for catching summer trout.

Picking places

The location you pick to fish on a stream should be determined by stream type. Trout in mountain brooks, where water temperatures remain cool even during the hottest weather, will be spread throughout the stream. They will hold in currents or pools where food is channeled to them, and the best location will usually hold the largest fish. The heads of pools as well as the bottom can hold trout, although the fish at the tail are usually smaller. Pocket water in small runs between pools is also a good location. Always think



food and where it would drift while looking at the creek, and you'll have a good idea of where the trout are waiting.

Larger streams that are mainly stocked water and that warm considerably during the summer also have areas where trout can be found. Most kids who have gone swimming in Pennsylvania's creeks know that the deeper you go in the water the colder the temperature becomes. Deep pools, even when surface temperatures are in the low 80s, will hold trout toward the bottom.

In addition to colder water, trout also need the water to contain enough dissolved oxygen. Warmer water cannot hold as much oxygen as cold water and the decreased stream flow does not mix the water with air as quickly, so viable locations for trout survival will be greatly reduced. Look for deep pools at the base of riffles. The pool will provide the cooler temperature while the riff will add sufficient oxygen.

A fishing gold mine is where a spring empties into the larger creek. You will see some springs because they enter from the bank above the stream, although most will flow into the creek well under the surface. Wet wading will quickly show you where springs are located.

Local tackle shops can be a great help, too. I go to areas during the afternoon and ask swimmers if they know where the springs are located; they are usually more than happy to show you, and most of the time they can give you a speech on spring locations throughout the entire stream . . . they are usually in the best swimming spots.

Swimming spots? Do we compete with swimmers? Large streams such as Big Pine in Lycoming County have such warm temperatures during the day when the sun is out that most of the trout feeding activity occurs in late evening or at night. I prefer to get on Pine by 5:30 and fish until dark. Smaller streams such as Cedar Run or Slate Run in Lycoming County usually have a good canopy of trees sheltering the water from constant direct sunlight, and can provide great fishing all day long. Some of these

streams, particularly those with the coldest water, are usually best during the afternoon. I consider it a great day to have the chance to fish Big Pine early in the morning, Cedar Run during the late morning and afternoon, and Pine again in the evening.

Approaches

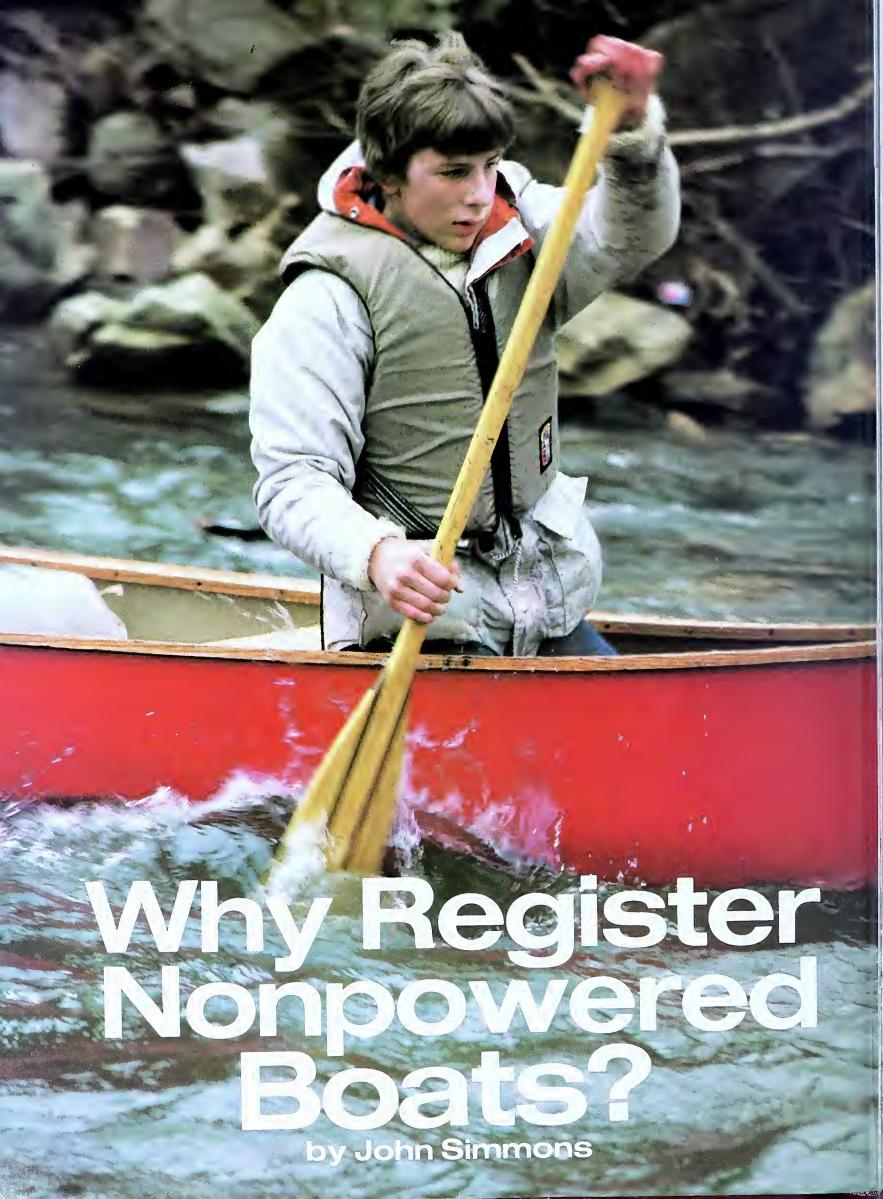
After you decide where the fish should be located on your particular stream, approach as quietly and with as low a silhouette as possible. Sounds and moving forms or shadows scare fish quickly. Pick a location to cast from where your movement won't be easily visible by the fish. If I'm fly casting, I may float a dry fly down through a riff to reach the trout below at the head of the pool. A downstream presentation allows the trout to see the fly before the line or leader, a definite plus in clear water.

If I'm fishing pockets or runs upstream, I stay well back from the trout area. I may lay out a lot of line, but the trout are seldom spooked. I like a 12-foot to 15-foot leader tapered to 7X in the lowest water. Switching between an Adams and Light Cahill in 14s to 18s can be productive all summer.

Lure fishermen who put the big stuff away and go with the smallest hardware available can also do well. A small C.P. Swing carefully cast to the side of a pool and worked with finesse can produce some big summer trout. As with flies, a light leader brings more strikes.

When a good summer storm brings rain and the creek is on the rise, trout abandon their caution and feed recklessly. Larger flies, bigger lures, and heavier leaders can be used. I know several dyed-in-the-wool minnow fishermen who can't wait for a rain in July and August. They catch large trout during the evening in the off-color water.

If you are like me, you can't stand the idea of putting away your trout equipment at any time of the year, much less during the warmest months when the woods are refreshing and the trout hungry. Know your stream, use the correct terminal tackle, be patient, be slow, observe, and cast to a spot where you expect a trout. It will become second nature as summer trout call you back again and again.



ith over 15 million boats in use, boating is one of the most popular forms of outdoor recreation in the nation. This growth has precipitated a need for additional facilities, regulations, and administration to provide for an acceptable recreational experience for the majority of boaters.

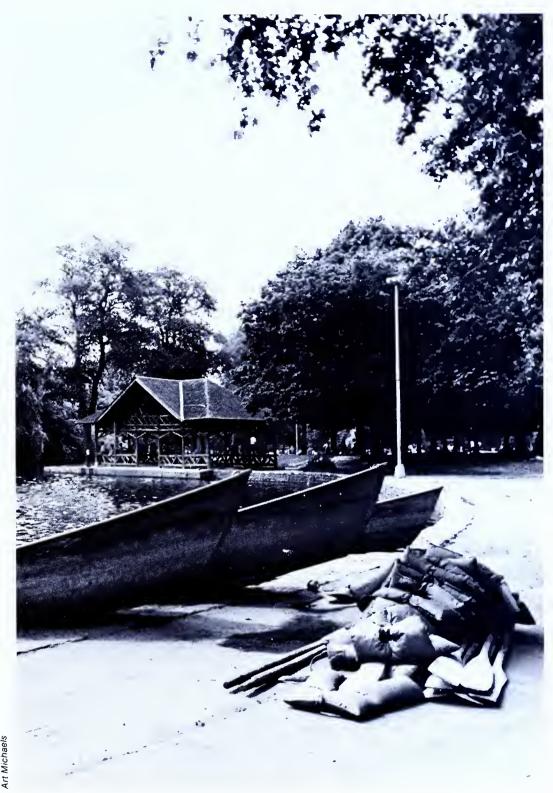
Pennsylvania has been fortunate to have had its boating program based on a true dedicated fund concept. All operating costs of the Fish Commission to provide services to the boater have been funded through fees collected from the boater—primarily registration fees and marine fuels tax. No general tax fund revenue goes toward any Fish Commission project.

Pennsylvania boaters have benefited greatly from this user fee concept, but it is apparent that with escalating costs and expenses associated with the administration of one of the best recreational boating programs in the nation, increased funds must be obtained. Commonwealth lawmakers are currently considering legislation that provides for the registration of nonpowered boats. The enactment of this legislation will assist in a major way in providing those additional funds to provide these much demanded services.

The Federal Boat Safety Act of 1958, in addition to other requirements, establishes a requirement of the various states to develop and implement a numbering system for boats. This system was approved by the secretary of transportation and was uniform across the states. The act required all undocumented vessels equipped with propulsion machinery of any type (motorboats) to have a number issued by the proper issuing authority in the state in which the vessel is principally used.

In Pennsylvania, the Fish Commission is now designated this authority. Pennsylvania's Act 93 of October 18, 1973, amended Act 400 of August 14, 1963, to provide "for the registration of motorboats and the regulation of vessels . . ."

This amendment, while not altering their status of being exempt from registration, placed all boats not equipped with propelling machinery



Charging one fee for all boats is appropriate because the administrative costs of issuing a registration are the same regardless of the boat type or length.

under the regulatory purview of the Fish Commission. The types of boats in this category are generally such watercraft as canoes, kayaks, rowboats, and sailboats.

For a number of reasons, there has been an increase in the number of sailing and canoeing enthusiasts. Nationwide over the past several years, sales of sailboats and canoes have been roughly 35 percent of the sales of outboard boats. Pennsylvania, with its extensive water resources, has

experienced equal growth in the number of these types of boats in recent years. These boats are particularly suitable for use at the many free access areas constructed and maintained by the Fish Commission with fishing and boating dollars.

The major portion of funding for 'the Commission access area program is derived from fishing license fees and fees collected for the registration of motorboats (30.2 percent) and the



Registering boats helps aid their recovery if they are stolen.

refund of Pennsylvania liquid fuels tax paid on gasoline used in motorboats (33.7 percent). Federal funds, which are derived from an excise tax on the sale of fishing and boating equipment, and the federal Motor Boat Fuel Tax are also used for the construction of these accesses (17.9 percent). Owners of non-mechanically propelled boats do not contribute directly or indirectly to any of these funds, yet they are becoming a prime user of these facilities.

Industry estimates that 20 percent of all boats are canoes and nonpowered sailboats. Assuming that this percentage holds true for Pennsylvania, the total population of non-powered boats would be 44,800 (238,000 x .20). However, the Bureau of State Parks issues approximately 30,000 launch permits to non-powered craft on its lakes, and the Fish Commission registers 14,000 nonpowered boats. These 44,000 known non-powered boats would indicate that Pennsylvania is well above the national average in the number of non-powered boats. A large number of boats can be assumed to be used on private lakes and public waters not

under the purview of the Bureau of State Parks, such as Lake Erie or the many large Corps of Engineers impoundments. Commission specialists estimate the true number of non-powered canoes, rowboats, and sailboats to be about 100,000.

The registration fee is the base for all expenditures for boating programs by the Commission. Act 400, August 14, 1963, established fees for the registration of motorboats at \$4 for boats under 16 feet in length and \$6 for boats 16 feet and over. Only through the receipt of other funding, namely the Federal Land and Water Conservation Fund in 1965, Project 70 in 1965, Project 500 in 1967, the Pennsylvania Marine Fuels Tax in 1971, and the U.S. Coast Guard Grant for Boating Safety in 1972, has the Commission been able to maintain this relatively low registration fee over the past 20 years and still continue to improve the quality and availability of boating opportunity.

The Coast Guard Grant was discontinued in 1979; the administration has eliminated the Federal Land and Water Conservation Program for the states;

Project 70 and Project 500 are complete. The Commission has been the recipient of boating safety grants through the U.S. Coast Guard from the Biaggi Fund, and it looks for receipt of additional future federal funding from the Wallop/Breaux program, which began in October 1985.

Fiscal year 1986 estimates of \$711,000 are encouraging. However, the Pennsylvania Marine Fuels Tax and registration fees are the only state funds available to continue the boating business of the Commission. In recent years, the amount received from the Marine Fuels Tax has decreased because boaters are using more fuel-efficient engines, and because they are more conscious of their fuel use, thus conserving fuel. If the Commission is to continue to provide new facilities, maintain present facilities, improve regulation of boat operation, and develop new education and information programs, the registration fees must be brought in line with what should be expected after having been held artificially low for so many years.

The proposed new registration fee schedule is intended to accomplish the following: (1) Increase revenue derived from motorboat registration fees to offset rising costs and to provide the state's share of matching federal grants. (2) Prescribe registration fees for boats not equipped with propelling machinery, and (3) Establish a single fee for all registrations.

• 1 Motorboat Registration Fee Increase. This is the first request for an increase in registration fees since passage of Act 400 on August 14, 1963. In 1964-65, when the Department of Revenue performed the function of registration, the Boat Fund was charged \$50,843 to register 82,471 boats, a per-boat cost of approximately \$0.61. In 1984-85, this figure rose to \$333,000 to register 228,000 boats, or a per-boat cost of \$1.46.

Expenditures for other aspects of the boating safety program have risen sharply from \$154,293 to 1964 to \$4.4 million in 1984-85. Much of the increase reflects costs associated with Act 195 and increased engineering and law enforcement efforts and the effects of inflation on daily operations. The Commission now owns and operates

over 150 boat access areas.

The educational program has grown from a small hastily prepared course outline to a highly sophisticated basic course with numerous audio/visual aids and a comprehensive text/workbook. Four specialists work full time, instructing the public, developing safety brochures, and designing safety programs. Seasonal employees and volunteers travel across the state in vans equipped with the latest audio-visual equipment, instructing the public and furthering safe boating practices.

This effort is successful. The average number of fatalities per year has dropped from 36 between 1970 and 1975 to 24 between 1980 and 1985, despite the fact that the number of boats in operation has almost tripled in the same period.

• 2 Prescribe registration fees for boats not equipped with propelling machinery. Registration fees are charges placed on a boat to pay for the use of services or facilities—a true user-fee concept. Monies collected are utilized for improvements of waterways, safety enforcement, bettering access to boatable waters, and development of an education/ information program and administration. Over the years, these programs have been developed with all boats in mind. The Commission has operated on the principle that all boats, no matter how they are powered, should benefit from these programs.

Thus, sailboats are permitted on Fish Commission lakes built primarily for fishing, boat launches have been built on good canoeing streams, and the education program has been directed toward promoting water safety, especially among high school students, and in developing an interest in boating through canoeing.

Over the years, 55 percent of Pennsylvania's boating fatalities involved nonpowered boats. In most cases, ignorance of basic safety principles has caused these deaths. Because the Commission does not know who owns nonpowered boats or how many there are, it is difficult to design an appropriate educational program to combat the comparatively high accident rate.

It has been demonstrated that

education can decrease the fatality rate among motorboats. It is believed that the same idea applies to nonpowered boat operators. However, the propriety of putting an all-out effort toward this goal using "motorboat dollars" is questionable. We do not register these boats, so there is no way to establish a direct line of communication with the owners to coordinate a safety and facility program. We do have a line of communication with the canoe and sailing clubs, and these clubs do an excellent job in their education programs. But these organizations attract only a small percentage of the total number of users.

The Commission has long had the authority to regulate nonpowered boats, but because only motorboats are registered and contribute to the Boat Fund, the voices of nonpowered boat owners have been weak. Registration would legitimize their voices in the directions and actions of the Commission.

About 30,000 nonpowered boats use Bureau of State Park facilities for which they must pay a \$5 launch fee. The Bureau of State Parks accepts the Fish Commission registration in lieu of a launch permit. Registration of nonpowered boats would in effect replace the launch permit system and result in minimal fee increase for 30 percent of nonpowered boats.

• 3 Establish a single fee for all registrations. The current fee structure is based on the assumption that larger boats should incur a larger fee than smaller boats. An arbitrary dividing point of 16 feet was established in 1964. Boats less than 16 feet were charged \$4, and those 16 feet and longer were charged \$6. Thus, in the early stage of our program, larger boats were charged a proportionally larger fee. Those boats over 16 feet provided just under 50 percent of the revenue, despite the fact that they accounted for only 35 percent of the number of registered boats. With the advent of the marine fuels tax refund. this discrepancy widened. Boats over 16 feet in length now provide 65 percent of the marine fuels tax and 55 percent of total revenue.

On the other side of the issue is revenue expenditures. Because unpowered boats and boats under 16 feet constitute the majority of all boats, they also receive the greatest law enforcement, development, and administrative effort. Historically, then, big boats have subsidized smaller boats.

The proposal to charge one fee for all boats is based on the premise that the administrative costs to issue a registration are the same regardless of the length or type of the boat, and that larger boats and powered boats contribute to the Boat Fund a proportionally larger amount as a result of fuel tax which is refunded to the Commission.

Factors to consider concerning a uniform registration fee and registering non-powered boats:

- 1. Administration and processing fees are obviously the same, regardless of boat type or length.
- **2.** All boats utilize ramps, docks, and other facilities.
- 3. Canoes, while not requiring as extensive development as a motorboat, often require two different access points—a put-in and a take-out.
- 4. Sailboats require additional attention in the design and construction of facilities. Factors such as prevailing wind direction, additional depth for sailboats with greater draft, and the exclusion of overhead obstructions, particularly power lines, increase development costs.
- 5. The Fish Commission administers an extensive boating safety and water survival program. This program is offered to students of canoeing and sailing as well as motorboating. Because of the accident rates among non-powered boats, much more effort is expended in this direction, and it is inappropriate that motorboaters finance the entire program.

A careful consideration of the entire boating picture seems to indicate a lack of justification for different fees. It is believed that this bill will help to rectify this condition that has existed for almost 25 years and distribute financial involvement in Pennsylvania's recreational boating program on a more equitable basis.

PA

John Simmons is the Commission Bureau of Waterways administrative officer.

County Features

Lackawanna and Wayne Counties

by Dennis Scharadin

Lackawanna County

L ackawanna County is located in the northeast region of the state. It is bisected by interstates 81, 380, and 84. It has a large metropolitan area surrounding Scranton in the central part of the county. Most of the trout fishing is put and take, but some waterways have a good carryover population. It has 42.8 miles of streams and rivers that are stocked with trout. Total acreage for lakes and ponds open to the public is 548.8 acres.

Chapman Lake

Chapman Lake is a 98-acre waterway located just north of the town of Montdale. To get there, take Route 247 north and look for the signs. It has no motor restrictions. The lake is a combination coldwater and warmwater fishery. However, trout are the most sought-after fish. During the early part of the trout season, most fishermen use bait such as corn, worms, salmon eggs, and cheese, or spinners like the C.P. Swing and the Mepps Aglia, Comet, or Fury.

Later in the season, during June and July, slowly trolling flies, like the black gnat, can account for some good catches. Don't be surprised if you latch onto a trophy trout of 4 to 8 pounds, because the Fish Commission stocks a good number of these trophies in the lake each year.

Chapman Lake also has a good bass and pickerel population. Fishing for these species comes into its own during the fall. October is an especially good month for pickerel, with catches of fish up to 28 inches. Most bass and pickerel fishermen use big shiners. Try a 5-inch shiner, hooked to keep it alive as long as possible, and fished below a bobber.

During the winter months, perch and trout are the main catch.

Lackawanna River

The river starts at Stillwater Dam, north of Forest City, and flows south through Carbondale and down into the Susquehanna River. It can be reached by taking Route 171 in the town of Carbondale. Approximately 9.5 miles of the river are stocked with many brook, brown, and rainbow trout. The river is fairly wide, 75 to 100 feet, and fast-running with more riffles than pool areas. It is wadeable if you are careful.

Some of the best fishing takes place during June and July, because the water level isn't as high as during the early season. Most anglers use worms and minnows, but flies also work well. According to Waterways Conservation Officer Bob Fasching, the river is underfished, especially some of the larger pools. It's also a good late-season fishery because the water level is controlled and the river will be fishable

when the other streams are too low. A good place to fish is the 5-mile stretch from the town of Simpson to the town of Forest City. You can park along the railroad bed that starts just east of the Simpson viaduct and runs along the river.

Lehigh River

The Lehigh starts in Gouldsboro State Park, West End Pond, and flows along the southern border of the county. It's entire length, about 13.6 miles, is stocked with many trout over the course of the season. It is a high-pressure fishing area. In spite of the fishing pressure, it has a good carryover trout population. There is also good natural reproduction of both brown and brook trout in the Lehigh. Unlike freestone streams, the Lehigh's water is a brownish color because of the high tannic acid level.

One place to try is the 5-mile stretch of river in Gamelands 127. Take the Gouldsboro exit on Route 380, go one mile west to the gamelands, and look for the road that takes you past the rifle range. The road parallels the river, and you can park along the road.

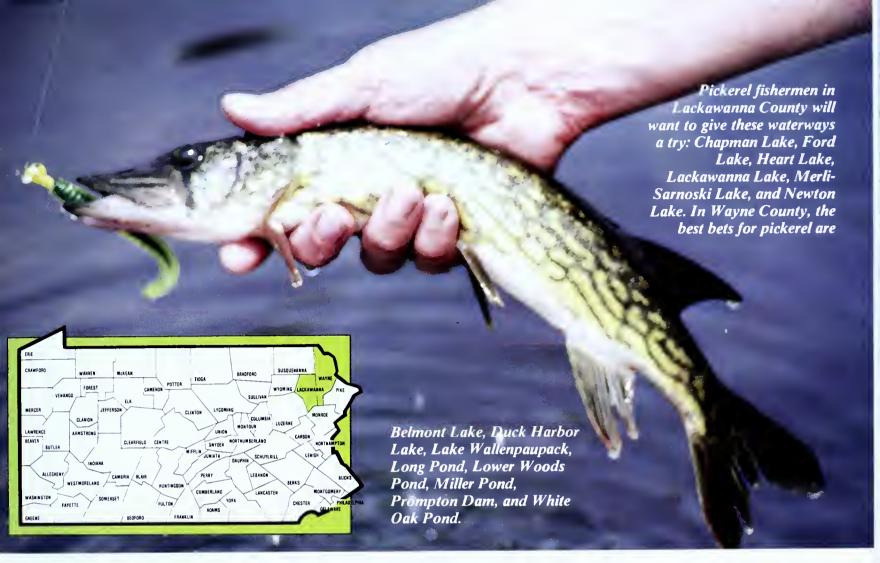
Trout are caught by all methods, but the Lehigh offers the best fly fishing in the county. Try streamers and nymphs during the early part of the season, but the best fly fishing starts in June or later. Hatches are many and varied. The blue dun and gray dun are good patterns.

Merli-Sarnoski Lake

Merli-Sarnoski, formerly known as Finch Hill Park Lake, is located on the top of a mountain. To get there, take Route 106 in Carbondale, and head north. It's about one mile from Finch Hill Corners. Although small, only 30 acres, it has good bass, pickerel, and panfish populations. It's stocked with brook trout throughout the year. Because of this variety the lake is a good year-round fishery. Boat fishing is allowed but no motors are permitted. A large parking lot is located about a half-mile away, but a tram operates from the lot to the lake throughout the day. Most fishing is from shore, and you can fish all around the lake. While trout are the most sought-after fish, bass are a real sleeper — bass up to 6 pounds have been taken. Spinnerbaits are the top bass catcher.

Roaring Brook

Roaring Brook starts below the Elmhurst Dam at the town of Elmhurst and flows northwest going through the Nay Aug Park section of Scranton and finally into the Susquehanna River. It parallels Route 435. About eight miles of the stream, from Scranton to Elmhurst, are stocked with brown trout. Near Elmhurst the stream flows through some deep gorges and has some deep pools, 20 to 30 feet, making it difficult but not impossible to fish. Near the Petersburg Sports Complex in Scranton, the stream is easily accessible and is a good place to fish for those who might have trouble with rough terrain. Baits like corn,



worms, and salmon eggs are popular along with spinners and spoons.

Tunkhannock Creek, South Branch

The Tunk starts at Montdale, flows west through Lackawanna State Park, and then along Route 438. It can be reached from the road. The creek is a small winding farm stream, about 10 feet wide, before it enters the park. Then it becomes a good-sized stream, about 50 feet wide, below the park. During the early season, fishing below the dams in Lackawanna State Park can add both bass and walleye to your catch. The fish in these holes are more active because the water temperatures are higher than the stream temperatures. The upper stretch has better fishing later in the season, especially after a rainfall and the water is murky. Bait works best at these times.

Fords Pond

Fords Pond is a 73-acre Fish Commission lake. It's a shallow warmwater lake with good channel catfish, bullhead, bass, pickerel, and panfish populations. It has a boat ramp and an electric-motor-only regulation. The lake is located off Route 307, just west of Clarks Summit by the Shultzville Airport. It's fairly weedy and difficult to fish from shore. Weedless lures, like chartreuse spinnerbaits, are good for bass and pickerel. Cut baits, minnows, crayfish, and stink baits work best for the catties.

Heart Lake

Heart Lake gets its name because it is shaped like a heart. It's a 30-acre waterway located near the intersection of routes 247 and 107. It has a good population of bass, pickerel, crappies, and panfish. It has little fishing pressure

during the spring and summer, but is a popular ice fishing lake. Its crappies average 9 to 10 inches, but some reach 14 inches. Try a white marabou jig fished 18 inches below a bobber for the best results.

Lackawanna Lake

Lackawanna Lake is a 205-acre DER lake located in Lackawanna State Park. It has good launch facilities, a boat livery, and an electric-motors-only regulation. To get to the lake, take exit 60 on I-81, take Route 524 west for three miles, and you'll be at the lake.

The lake is strictly a warmwater fishery. It has good populations of muskies up to 20 pounds, walleye 6 to 10 pounds, channel cats, 6 to 10 pounds, walleye 6 to 10 bullheads. Both musky and walleye fishing is best during the spring and fall. Bait fishermen float big shiners for muskies and nightcrawlers for walleye. Channel cats are taken on cut baits, minnows, nightcrawlers, and crayfish. Try lures, like Rebel's crawdad, if you aren't a line-watcher. Stink baits should fill your stringer with bullheads.

Wayne County

Wayne County is located in the northeast corner of the state. It is bordered by New York on the north and New Jersey on the east. Its eastern boundary follows the Delaware River. Route 6 crosses the lower part of the county. Much of Wayne County is made up of wilderness-type terrain that is privately owned.

Prompton Dam

Prompton Dam is a 325-acre dam built by the Corps of Engineers on the Lackawaxen River. It is located along





Route 170 between the town of Prompton and Aldenville. A boat launching area is located midway on the lake. It has a 10 horsepower maximum regulation.

The lake has smallmouth and largemouth bass up to 5 pounds, nice bluegills, brown bullheads, black crappies, and yellow perch. It also has muskies. The upper end of the lake is shallow and provides better fishing throughout the spring. Lures and baits to use are worms, 2-inch minnows, and 1/32-ounce jigs with twister tails in purple, glazed yellow with glitter, and chartreuse. Later in the year, drifting with the wind is a good method to find the fish.

Upper Woods Pond

Upper Woods Pond is a 90-acre Game Commission lake located just north of Route 371 near the town of Cold Springs. Directions to the pond are marked from Cold Springs. The waterway is a glacial lake with depths up to 90 feet, and is managed as a coldwater fishery. Electric motors only are allowed. It is stocked with trout, and kokanee salmon were reintroduced in 1982. The kokanee are currently averaging 10 inches to 12 inches, with the biggest about 13 inches. Kokanee can best be caught throughout the spring and summer months.

In the spring, try trolling a Christmas tree rig baited with worms. Upper Woods Pond is also an excellent ice fishing spot. In addition to the electric-motors-only regulation, you are not permitted to have dead or live minnows in your possession while fishing the lake.

Lower Woods Pond

Lower Woods Pond is a 95-acre lake built by the Fish Commission. It is located two miles west of the intersection of routes 371 and 191. It's a shallow lake, about 20 feet at its deepest spot, and has a grassy shoreline and stumpy areas. There is an access area and the electric-motor-only rule is in effect.

Unlike Upper Woods Pond, Lower Woods Pond is

strictly a warmwater fishery. It has bass, pickerel, panfish, walleye, muskies, and crappies.

Ice fishing is good for both perch and pickerel. Occasionally a walleye is caught. Jig for perch with a Thomas spoon sweetened with a perch eye, maggots, mealies, or mousees. Tip-ups with 4-inch to 5-inch shiners are tops for the predatory fish. Later in the year panfish can be caught almost anytime and bass fishing is best in the evening. Walleye fall for the slow trolling of a flatfish, or an Indian Joe and Junebug spinner with a nightcrawler. The best time to try this rig is from daybreak until about 9 a.m.

Duck Harbor Pond

Duck Harbor Pond is a unique fishery. Most lakes are either warmwater or coldwater fisheries, depending on their depths and water temperatures. Duck Harbor is a 190-acre lake with depths up to 80 feet that is a two-story fishery. Coldwater fish, trout, survive in the colder, deeper waters of the lake; and warmwater fish, bass, pickerel, walleye, and panfish, are found in the more shallow, warmer levels.

The lake is located about 15 miles north of Honesdale along Route 191. Signs along the road show you where to turn for Duck Harbor. There is a boat access area, and an unlimited horsepower regulation. Shore fishing is limited to the access area only because of private property.

Fishing in the early part of the year is basically trout fishing. Anglers troll with Christmas tree rigs and use salmon eggs or spinners. In late May and early June, fishing the shallows with poppers provides some excellent bluegill fishing. From June until winter, bass and pickerel are the main targets. Black or purple plastic worms take their fair share of fish. Surface lures like the Hula Popper and Tipsy along with silver Rebels and Rapalas are also popular. Be sure to try the stumpy areas located at opposite ends of the lake. They're bass and pickerel hotspots.

Belmont Lake

Belmont Lake is a 250-acre warmwater fishery located along Route 670 north of Honesdale. Road signs will direct you to it. It is a good year-round fishery. The water reaches depths up to 20 feet. It has a rocky shoreline, weedbeds, and areas of visible stumps. There is a boat access area. It also has special regulations — walleye daily limit of 3, largemouth and smallmouth bass combined daily limit of 3, and pickerel minimum size of 18 inches, daily limit of 3. See page 25 of your 1986 Summary of Fishing Regulations and Laws.

The best walleye and pickerel fishing takes place through the ice. Minnows and tip-ups are the rule. In the spring, panfish reign supreme. Try 2-inch twister tails, sassy shads and dressed spinners. Bass take over in June and run into the fall. Plastic worms, purple or black, rigged Texas-style take their share as do spinnerbaits in single and tandem blade styles. Fall brings in the musky fishing with drifting



large shiners the most popular tactic. Shore fishing is limited and those who try wading should be careful.

Long Pond

Long Pond is another two-story lake. It is 90 acres in size and has depths that go up to 30 feet. There is an access area and an unlimited horsepower regulation, and there are ample places for shore fishing. Long Pond is located about 10 miles north of Honesdale along Route 670.

Fishing pressure is heaviest during the winter and spring when trout are stocked. Trout are readily caught on baits such as corn, salmon eggs, and worms. Spinners like the Mepps Black Fury and Aglia also take trout. In late May and June, anglers fish the weedbeds for crappies and other panfish.

Clarks Green

urks Summit

Blakely

Springbrook

Throops

Dunmore

Yostvill

247

Miller Pond

Miller Pond is a 60-acre Fish Commission lake located approximately 11/2 miles north of the intersection of routes 247 and 670. Follow the signs from there. Miller Pond is shallow and is filled with weedbeds, stumps, and floating islands. It is an exceptional bluegill fishery. There is a boat access area and ample shore fishing. Fishing

Delaware River

and then anchor.

pressure is usually light

by the end of the summer.

The best tactics are to use

garden worms and a bobber

and drift until you find a school

The Delaware River in Wayne County is one of the best trout waters in the state. Exceptionally large trout, browns and rainbows, can be caught in the West Branch

from the New York border down river to Lordsville. Some of the better areas are at Balls Eddy, the confluence of the east and west branches near Hancock, the rift above the Lordsville bridge and the rift below the bridge. Shore fishing is good all along the Pennsylvania side. Bait and lures are your best bet until the weather warms, then fly fishing with nymphs, wets, and streamers is exceptional.

Shad fishing starts about the end of April at Narrowsburg and usually lasts until the end of June. Fish Commission access areas are at Narrowsburg, Damascus, Callicoon, and Buckingham. Fishing is usually good up to Hancock for both boaters and shore fishermen. The

reston Park Lake Como Lakewood Priceville Povotelle Lookout Rock Lak Pleasant Mount 670 Whites West Damascu . Crea mito Bethany Simpson Honesdale majority of Carbohdale the shad are Indian Orchard caught with darts of various color Hoadleys Mills South Canaan combinations. 6 191 Smallmouth fishing is Varden Hawle at its finest from Uswick Narrowsburg north to Lordsville. Fish the deep holes with baits such as Arlington stone catties, hellgrammites, or crayfish. Lure flippers should try Rebel's crawfish in natural green or brown, or a plastic crayfish. Moscow The best walleye fishing is in the 196 Daleville wloundland Narrowsburg hole. The bait to use is lamprey eels if you can get them. Drift them along the bottom. When you catch a fish mark the spot. Then you know where the Gouldsboro school is located. This area of the Delaware is perfect for float fishing trips, but beware of weekend trips from May 30 until Labor Day, because you'll be joining the flotilla of weekend canoeists.

Trout streams

The cream of the trout streams in Wayne County are the three branches of the Dyberry Creek and the Big Equinunk. The East Branch, West Branch, and Main Branch flow from Lower Woods Pond to Honesdale. The Big Equinunk Creek flows into the town of Equinunk on Route 191. All these streams are excellent spring fisheries.

Dennis Scharadin is a freelance writer-photographer. For their help with this article he gratefully acknowledges the assistance of Mike Badner, Wayne County waterways conservation officer, and Bob Fasching, Lackawanna County waterways conservation officer.

ANGLERS CURRENTS



Trained Trout

On a crisp, cool morning last April, the very familiar Pennsylvania Fish Commission stocking truck pulled streamside at Turtle Creek. The brown and brook trout were loaded atop a flatcar and pulled by a train engine along the tracks adjacent to the stream. With the help of the Turtle Creek Industrial Railroad, the trout were placed in large barrels, equipped with aerators. The barrels were accompanied by support personnel and portable generators, riding on the flatcar. The nearness of the tracks to the stream allowed the support personnel to stock the trout quickly in the less accessible areas of Turtle Creek. The stocking of trout by train was right on schedule without a moment lost. Many thanks go to the Turtle Creek Industrial Railroad, Fish Commission, and to the sportsmen of Braddock, Trafford, Pitcairn, and Monroeville. — Turtle Creek Watershed Association, East Pittsburgh, PA

'Notes from the Streams'

Make a face like a worm

You may remember the stream note I wrote last year about the gentleman who, during trout stocking, had a trout rise while "making a face like a worm." In the continuing saga this year, the same gentleman told a young lad who had accompanied us on the stocking that trout were attracted by someone making a face like a worm. The youngster was somewhat shy, but after considerable urging, he made a face. At that exact moment, a beautiful brown trout leaped from the tank compartment on the truck and landed at the startled boy's feet!—Kim D. Pritts, waterways conservation officer, northern Lancaster County

Preseasoned trout

Feeding the fish bread is a popular way for many sportsmen to locate trout before opening day. On one of my streams, the trout developed a distinct preference for garlic and onion bread. I wonder if these trout needed any seasoning when they hit the frying pan?—Kim Pritts, waterways conservation officer, northern Lancaster County

Right place, right time

As a student intern with the Fish Commission, I have been able to participate in a variety of law enforcement activities and learn how the Law Enforcement Division serves the public. What I didn't realize, though, was how far beyond conservation law enforcement this public service goes.

While on a routine patrol of Harveys Lake in Luzerne County, Northeast Regional Supervisor Kerry Messerle and I just happened to observe an individual removing a purse from a parked vehicle. Kerry acted quickly and professionally, and swiftly had the individual in custody. Naturally, the owner of the purse was grateful.

Upon checking the individual's record it was discovered that he was wanted for parole violations in another state and was suspected in other violations of the crimes code there. For us, it was just a matter of being in the right place at the right time, but it shows that the Fish Commission's service to the public is neverending and goes beyond the scope of duties that most sportsmen are accustomed to seeing.—Nick Pajovich, student intern, Northeast Regional Office

A spark plug

Aaron Teel and Bill Gezik, seniors at Kane High School, were assisting with the preseason stocking of the South Branch of Kinzua Creek. As a matter of conversation, I was relating some of my experiences as a trainee back in 1967. While patrolling Lake Wallenpaupack, we observed a young man casting and retrieving a fishing line without a license displayed on an outer garment. When asked for his license, the man held up the rod tip and inquired, "Do you need a license to practice?" There hanging on the end of a foot of a line was a spark plug. The fisherman explained he had just gotten out of the service and was just trying out his gear. Aaron remarked, "Maybe he wasn't fishing, but he was definitely plugging the shoreline!"—Don Parrish, waterways conservation officer, McKean County

Allegheny aviary

Recently I traveled from Tionesta to Emlenton by boat. I was amazed at all the feathered fishermen I saw on the Allegheny River. There were blue herons, kingfishers, a common egret, ospreys, mergansers, cormorants, loons, scaup, buffleheads, and goldeneye all in good numbers. In addition, there were many hawks and turkey vultures soaring the thermals over the river. To top off the trip, an old-timer told us of a bald eagle he had seen several days before. Could it be that licensed fishermen are overlooking a great fishery?— Robert L. Steiner, waterways conservation officer, Venango County

Cumberland County air strike

Seems that there's a gutsy goose at the Commission's Huntsdale Fish Cul-

ture Station in Cumberland County. Last April, hatchery foreman Ray Youngs was standing on a concrete bulkhead to check water levels between two earthen ponds. Then, out of the sky with no warning he heard the big Canada goose's wings flapping, and the bird was hissing. Youngs had inadvertently moved too close to the bird's nest, and it attacked, defending the nest. The foreman fell backward into the water. He was not seriously injured, but from now on he gives way to all gaggles.—Ken Martin, superintendent, Huntsdale Fish Culture Station, Carlisle, PA.

Jumping in with both feet

It was St. Patrick's Day and the students from the Bradford Children's Home turned out to help stock Hamlin Lake in Smethport with 3,500 trout. Everyone was excited to participate and it took a while to get the hang of the rhythm of one-two-three-go, with two kids tossing one pail. After some slipping and sliding, one young person exclaimed, "Oh, I got my foot wet!" I looked at her leather work shoe and said, "I'll bet it's the left one!" She smiled and offered, "I might as well get the other one wet so it doesn't feel bad." Plunk went her right foot into the 40degree water. Stephanie Cooper had fun! So did Kevin Dunbar, Russ Fowler, Teresa Grimes, Gina Guzel, John Lee, Scott Mills, Stephanie Seagren, Roy Ser, Willis Taft, and Russ Woods. Thanks gang! I had fun, too!—Don Parrish, waterways conservation officer, McKean County

Multiple use? Yes but . . .

While patrolling Dunkard Creek on a hot, sunny Sunday last summer, I came upon four individuals drinking beer next to a popular swimming hole. After having observed them discard several bottles in the weeds, I decided to put an end to the party. All the individuals were given warnings for littering and at my request filled a garbage bag with trash from the surrounding area. They then left the area.

Imagine my surprise when the following Sunday, again patrolling the same area, I came upon a local church organization engaged in a baptism ceremony for several individuals.

I think the sportsmen of Pennsylvania will agree that we need a lot less of the former and it wouldn't hurt to have more of the latter.—Les Haas, waterways conservation officer, Greene County

Braggart

An angler using spinning gear and bait approached a fisherman near a flyfishing-only delayed-harvest area and complained about the number of posters marking the special regulations area. He went on to tell the other fisherman that he would go in and fish if only one or two signs were posted, but with all that were visible, he didn't think anyone would believe him if he used the excuse that he didn't see the posters. Luckily he decided to stay out of the special regulation area. The fisherman he was talking to was a deputy waterways conservation officer!—Kim D. Pritts, waterway conservation officer, northern Lancaster County

Debts and debtors

While working at the Buffalo Sport Show in 1985, WCO Gary Deiger and I were busy writing licenses and answering questions. A man purchased a license, and after he left, I asked WCO Deiger if he had collected the \$20. He hadn't, neither had I. Needless to say, Gary went looking for the man and could not find him, so each of us put in \$10 to pay for the license. Upon arrival back at our respective areas, WCO Deiger sent the man a letter requesting that he send the \$20. No response was received, so we thought the worst.

While working the show in 1986 this same man walked up and asked if either of us was there last year. We both said we were and he handed us a \$20 bill and told us he was the one who hadn't paid last year. It really made us think differently of the man, and he also then purchased a 1986 license and told us to keep up the good work for the Fish Commission.—Cloyd H. Hollen, assistant supervisor, Northwest Region

USCGA courtesy exam

One Saturday last April, my father, son, and I took my 16-foot center console boat to Blue Marsh Lake for its spring shakedown cruise. While we were preparing the boat and gear in the tie-down area, USCG auxiliarist Louis Olszenski asked if I were interested in a courtesy marine exam (CME) of my boat's safety equipment. Mr. Olszenski was helpful and courteous, and we gained much from the check. All boat-

ers can profit from these examinations. That CME decal means a lot!—Art Michaels, editor, Pennsylvania Angler, Boat Pennsylvania

Fakin' it

One of my young deputies was assigned plainclothes duty on the opening day of trout season, but when he arrived at the stream with his fishing gear, he realized he hadn't purchased his fishing license vet. Since he was scheduled to remain in that area for several hours and he didn't want to appear out of place by simply standing around while everyone else fished, he feigned reel trouble. As he slowly dismantled and then reassembled his reel over a period of nearly an hour, an older gentleman next to him urged him to hurry because the fish were really biting. Finally, in a stern grandfatherly tone, the man said, "Son, you are just going to have to put that line in the water if you expect to catch any trout!" - Kim Pritts, waterways conservation officer, northern Lancaster County

Still cutting teeth

About 60 people turned out to see the St. Pattie's Day stocking of Hamlin Lake in Smethport. The air temperature was 40 degrees, and 1 noticed a young mother holding her baby clad in a snowsuit. I said, "Your child is probably the youngest I've ever seen at a stocking!" A short time later, l observed a young man with a babe in arms also dressed in a snowsuit. Curiosity got the best of me, so I asked, "How old is your baby?" The proud father replied, "Nine months." I related the earlier conversation with the young lady and began walking toward her to learn the age of the other interested on-looker. The man followed me, equally curious. When I asked the age of the other baby, she smiled and answered, "Eight months." I turned to the young fellow and said, "You lose!" "Oh, darn!" he replied.-Don Parrish, waterways conservation officer, McKean County



MAIL

Ronald Reagan, President The White House Washington, D.C. 20050

Re: March 18 Meeting with Prime Minister Mulroney

Dear Mr. President:

We are the attorneys general of the states whose people and environment are suffering great damage from acid rain. We write to you concerning the recent report of the Special Envoys on Acid Rain, and your March 18, 1986, meeting with Prime Minister Mulroney of Canada.

The time has come for this nation to heed the pleas from the northeastern states and Canada for reduction in the air pollution emissions which cause acid rain. Science now tells us all we need to know in order to cure this problem. We know that emissions of sulfur oxide, nitrogen oxide and hydrocarbons are the cause of acid rain, and that each is harmful in and of itself to the people and environment both in the areas of emission and at great distances from the sources. We know that the problem of acid rain is undoubtedly linked to those high emission areas of the midwestern states located directly upwind of our states and eastern Canada. The National Academy of Sciences confirms that emission reductions in this area will result in a proportional reduction in acid rain in eastern North America. In our states, lakes are dying, forests are in decline, the corrosion of building materials and monuments is being accelerated and visibility is greatly reduced, all as a result of the unnatural level of acidity in the rain and pollution in the air.

All prominent authorities who have spoken on the issue have urged immediate action to reduce emissions: the National Academy of Sciences, the Office of Technology Assessment, the Senate Environment and Public Works Committee, the White House Panel of Experts appointed by the Office of Science and Technology Policy, your former EPA administrator, Mr. Ruckelshaus, the National Governors Association and

most recently your special envoy, Mr. Lewis.

Mr. Lewis' call for action, however, is flawed. We are pleased with his recognition of the seriousness of the problem and his conclusion that the time for action has arrived. But his recommendation for a \$5 billion program of research into emission control technology is unrealistic. First, we already have technology available to greatly reduce these emissions. While research should continue to search for ways to improve these methods, emission reductions cannot wait the many years necessary to bring the new methods into commercial use. If large amounts of federal funds become available, then they should be used predominately to construct and install existing control technology.

Second, emission reductions should not be dependent upon massive amounts of federal subsidies. It is by no means clear that Congress could supply the level of funding suggested by Mr. Lewis. Emission reductions can proceed without federal funding. The existing laws provide the means by which you and Administrator Thomas can compel the responsible states to cut emissions.

Use of part 115 of the Clean Air Act seems especially appropriate at this time. As EPA has found, the Canadian government has given the United States rights to protection from Canadian air pollution emissions. Canada more recently has committed to substantial cuts in its sulfur dioxide emissions. Every knowledgeable researcher, including Mr. Lewis, acknowledges that United States air pollution is causing great harm to Canada's environment and its citizens. Thus, all the prerequisites for action under part 115 have been satisfied, and we are convinced that such action would have substantial benefits to the northeastern states as well. We also note that the enactment of a one-hour sulfur oxide standard would also have immediate positive results in both countries.

We applaud your decision to devote your personal attention to this problem, and urge you to translate that interest into an effective program of emission reductions. — Robert Abrams, Attorney General of New York; Steven E. Merrill, Attorney

General of New Hampshire; Joseph I. Lieberman, Attorney General of Connecticut; Francis Bellotti, Attorney General of Massachusetts; LeRoy Zimmerman, Attorney General of Pennsylvania; Hubert H. Humphrey, III, Attorney General of Minnesota; Jeffrey Amestoy, Attorney General of Vermont; James E. Tierney, Attorney General of Maine; Arlene Violet, Attorney General of Rhode Island; W. Cary Edwards, Attorney General of New Jersey; Bronson C. LaFollette, Attorney General of Wisconsin.

I would like to request the assistance of boaters, fishermen, hikers, photographers or anyone who visited Wildwood Lake in north Harrisburg before 1972. I am conducting a study of the history of American lotus (Nelumbo lutea), a large emergent water plant that nearly covers the entire surface of the lake today. American lotus in late summer stands approximately 3 feet above the water surface, has 2-foot diameter pizza-pan shaped leaves, and 8-inch diameter yellow flowers. If you have knowledge of Wildwood Lake before 1972, especially if you remember the presence or absence of this plant or have photographs, I would appreciate hearing from you.—William S. Ettinger, 222 Lilac Lane, Douglassville, PA 19518.

I am interested in collecting back issues of *Pennsylvania Angler*. I need copies from 1931 through 1958. If any readers would be interested in selling or trading copies, could you please have them contact me? — *Barry T. Kerlin, P.O. Box 1095, Mechanics-burg, PA 17055*

This past autumn, my two children and I were fishing Cannonsburg Dam when the water level was very low due to lack of rainfall. To our surprise, we found quite a few large clams. Are these "freshwater" clams legal to pick and are they good to eat?—Zig Niedwiecki, Pittsburgh, PA

Judging from the number of inquiries I have received this year concerning clams in our streams and lakes, either anglers are becoming more aware of their environment or the low water flows exposed more clam beds. What you observed was

one or two species of freshwater clams out of the 40 or so species that exist in the small streams and lakes in southwestern Pennsylvania. The watersheds of the Ohio River Basin, which includes Cannonsburg Lake and Chartiers Creek, contain a large percentage of all the species of freshwater clams in North America.

There are enough clam beds in the middle and lower Ohio River that states like Kentucky actually have commercial harvest of clams for making buttons.

Freshwater clams are edible, but one has to be careful where the clams are obtained. They tend to concentrate impurities in areas where domestic and industrial discharges occur, and may contain concentrations of chemicals that make them taste bad, or they may become toxic.

You may collect and possess up to 50 clams in any one day. They fall under the same laws as fish bait and/or baitfish, and if you are over 16 years old, you must have a fishing license to possess or gather the clams.—C. Blake Weirich, Area 8 fisheries manager, Somerset, PA

We all wrote letters, but I want to thank you again for being our friend. In Pennsylvania we all need friends to keep the outdoors free and healthy. In our school we can feel proud to get the extra training about Pennsylvania. Our teacher tries to teach us all to protect and save the environment for the future. I just hope we can reach our goals we have set. I am going fishing this year and my mother and father are going also. We will all try our best to help you make your job a success.—Windy, Mr. Davy's 5th Grade class, Pleasant Gap School, Pleasant Gap, PA

The letter above was received by Executive Director Ralph W. Abele shortly after he and other Commission personnel visited this 5th grade class.

The article about the similarity of Pennsylvania and English trout streams was particularly interesting. While never having had the opportunity to fish in England, I have done so in Ireland—and there is great similarity there.

One method of fishing there is "dapping." A pair of freshly hatched mayflies are tied to a hook, then at the end of a long bamboo rod gently floated downwind in the air, lightly "dapped" on the lake surface zingo-a nice two-pound brown trout!—Jim Norris, Doylestown, PA

The Pennsylvania Fish Commission has played an integral part of an exciting community project, and on behalf of the Erie Community Foodbank and all the residents of Northwestern Pennsylvania who benefited from this joint venture, we would like to extend our gratitude.

Each fall, thousands of coho salmon are processed by volunteers for distribution to those persons in need of emergency food. The Fish Commission provides the salmon, and volunteers from local sports clubs, the Erie Downriggers, and the S.O.N.S. of Lake Erie clean them at space donated by Triton Seafood Company. The U.S. Marines provide transportation for this project.

The cleaned fish are frozen and distributed through the network of food pantries and soup kitchens belonging to the Erie Community Foodbank. During June 1985, this network provided 9,200 food bags and served 30,000 meals, so you can see a great many people benefit from this work. This project is an excellent example of what foodbanking does, and how it can be successful only with the support of people like you.

We had three work sessions this year, October 10th, October 23rd, and October 30th. This work produced 1,567 pounds of cleaned fish for distribution, and the entire amount was distributed by November 8, 1985.

I would like to thank you again for helping to make this possible.— Suzanne Cascio, administrative assistant. Erie Community Foodbank, Inc.

I am writing in response to your request for comments on tournaments in the February issue of the Angler.

Fishing, during most of my lifetime, has been a non-competitive sport. Or to state it more correctly, the competition has been between angler and fish rather than between angler and angler. This has been very beneficial, in my case at least — an

opportunity to get away from the pressures of a working life to enjoy an easy-going, relaxing pastime.

Competing for prizes in other sports has long been accepted, but fishing until recently was in a different category. The Fish Commission has been encouraging us to introduce children to the pleasures of fishing. This idea is fine, but much of the benefit will be lost if they learn that the goals are prizes, citations, and publicity rather than the simple enjoyment of acquiring and testing skills in a healthy outdoor environment.

It appears to me that the only benefits of fishing contests are increased promotion for sponsoring organizations and increased sales of fishing licenses. If these objectives are important to sportsmen's clubs and the Fish Commission, I am sure that other methods could be used to attain them. There may still be many who could be shown that there is much to be gained by fishing just for the fun of it.—Daniel Houck, Allentown, PA

In regard to tournament fishing, I find it very frustrating to drive 35 miles to my favorite fishing spot only to find the boat launch filled with lines of tournament fishing boats, and after waiting in long lines and getting out in the boat. The so-called "tournament fisherman" only seem to race their boats across the water and do very little fishing.

Possible conflict with tournament fishermen could be avoided if they were limited to a few tournaments a vear, and schedules were posted at launch sites well in advance of tournaments.—Ron Miles, Clarks Summit. PA

BACKTALK

The Fish Commission invites readers to write letters to the editor for publication consideration in this space. If you have an opinion on Angler content, a question on fishing, boating, or on the Fish Commission, or a helpful idea, send correspondence to: The Editor, Pennsylvania Angler, P.O. Box 1673, Harrisburg, PA 17105-1673.

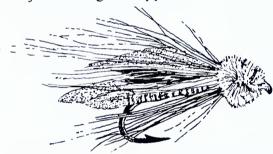
RANGE OF FISH SENSES LATERAL HEARING VISION **SMELL** LINE THOUSANDS HUNDREDS UP TO OF YARDS COURTESY OF MARINER OUTBOARDS

Correspondence Tip

If you ordered subscriptions, publications, and other items from the Fish Commission, and if you need to correspond with the Fish Commission about your order, be sure to include in your letter the 7-digit number on the back of your cancelled check. This number appears directly below the stamp, "Pay to the order of the state treasurer."

Sam Enerett

Use a Muddler Minnow to imitate several offerings. This fly was originally created to imitate a sculpin. Tied in small sizes with dark materials it's a good dragonfly nymph, and when fished dry, it looks just like a grasshopper.



When you're stream fishing and a hatch starts, instead of using a dry fly, try a nymph first. A nymph will often take trout before a dry fly, especially when the hatch is just beginning.

All palomino trout originated from a single "freak" female rainbow trout, discovered in 1954 in West Virginia.

If your depth sounder transducer is mounted on a kickup bracket, adjust the bracket so that it is firm, but not overly tight. You don't want high-speed operation to cause the transducer to kick up, but you do want it to move on impact with floating debris.

If your boat trailer has rollers, be sure to check them every so often so that they rotate smoothly. Lubricate them once or twice a season. In addition, be sure your boat's hull seams and joints don't rest on the rollers. Only the hull's flat parts should touch the rollers.

Swivels and other hardware can interfere with lure action, so to fish lures on ultralight tackle, tie the offering directly to the line with an improved clinch knot or with a uni-knot.

Always work a lure or fly all the way back to you before picking it up for another cast. A good fish might be inspecting it as you bring the offering past the spot where you wanted the lure to work. Fishing the lure all the way in could let a late hitter strike.

Don't stand in a johnboat. These unstable craft are not meant to stand in, and many accidents have been attributed to this circumstance.

To hook a trout on a very small fly with a thread-like leader, simply lift the rod as soon as the fish strikes. No rearing back or arm-wrenching hits.

Boron and graphite are the main ingredients in rods these days because, for one reason, the materials are very strong vet light in weight. Thus, cumbersome, thick rods have been replaced by the lighter and stronger hybrids.

Caddis flies are common in the Commonwealth, so always carry some and fish them frequently. The elk hair caddis is a good pattern because it floats well, it's a cinch to tie, and it's easy to see during the drift.

illustration by Rose Boegli



Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities.

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The LAW & YOU

by Dennis Guise

Each year, waterways conservation officers and their deputies prosecute more than 10,000 summary violations of the Fish and Boat Code and regulations. Summary offenses are often resolved by field acknowledgements of guilt or in summary proceedings before district justices. Persons involved in such violations occasionally express concern about whether their involvement will damage their reputations as law-abiding citizens.

A summary violation of the Fish and Boat Code or regulations is roughly analogous to a traffic ticket. Summary violations ordinarily involve no allegations of moral turpitude and require no showing of specific intent to violate the law.

Even when the person commits a summary offense by mistake, he or she may still be guilty. When someone pleads guilty or acknowledges guilt of a summary violation of fishing or boating laws and regulations, he or she is not admitting to deliberate criminal misconduct.

Except in rare cases, apprehension for a summary offense does not

involve the arrest of the violator. Summary violations of the Fish and Boat Code and regulations are handled in much the same manner as are minor traffic violations. Violators may be cited, or if they desire, they may dispose of cases by field acknowledgements of guilt, which involve use of a procedure unique to the Fish Commission and our sister agency, the Pennsylvania Game Commission. Most summary offenses are punished by fines of \$10-\$100 plus court costs.

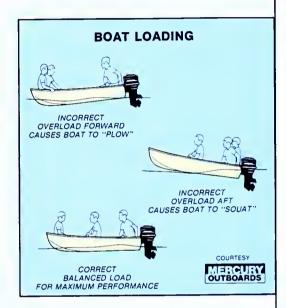
The Fish Commission obviously wants everyone to avoid violations of fishing and boating laws and regulations, and we try to keep everyone informed about the contents of our rules. However, everyone realizes that violations will occur, and that sometimes they result from oversights or omissions by wellmeaning, respectable law-abiding citizens. Persons convicted of summary offenses are not "criminals." As long as an individual is not involved in repeated or persistent violations of the Fish and Boat Code or regulations, a summary violation should not damage his or her reputation.

Dennis Guise is Fish Commission chief counsel.

New State Record Yellow Perch

Ivan Grek, of Erie, caught a new state record yellow perch on April 22, 1986, while still fishing with minnows from the North Pier in Presque Isle Bay. The big perch weighed 2 pounds, 3.5 ounces, and was 14 inches long.

This catch beats the old record, a 2-pound, 3-ounce perch that Steve Baldi caught in 1981 in Lake Winola (Wyoming County).



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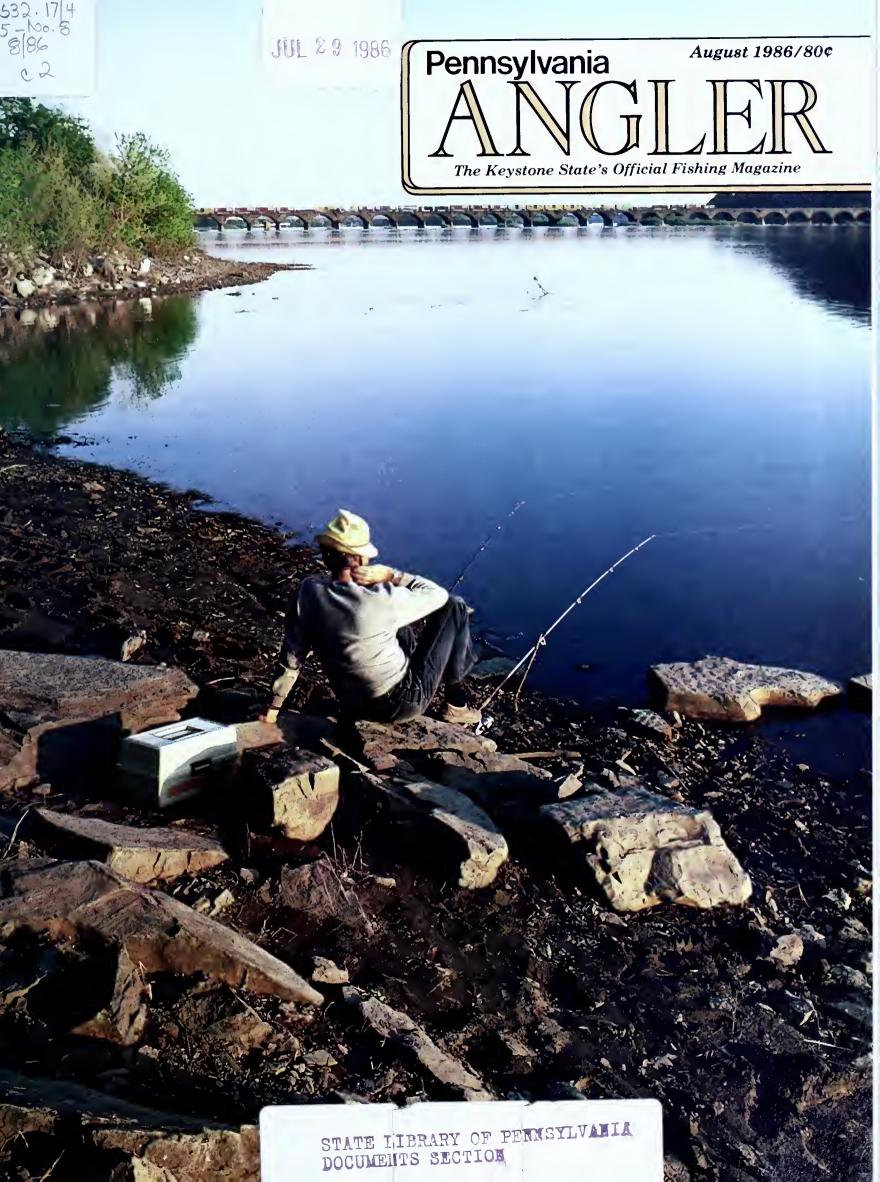
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You have a fishing friend in Pennsylvania



Straight Talk

SHAD RESTORATION MILESTONE

On March 19, 1986, FERC Administrative Law Judge David Harfeld ordered, in an initial decision, that the operators of the Conowingo Dam on the Susquehanna River participate in a program to demonstrate the feasibility of restoring alosids to the Susquehanna River and its drainage. This involves the construction of a new fish lift on the east side of the powerhouse, improvements to the west bank fish lift, and trapping and trucking of all adult shad captured at the expanded and improved Conowingo facilities. This decision was an absolute major breakthrough in the efforts to restore that fishery of shad and river herring to the Susquehanna River. Although the Pennsylvania Fish Commission, Maryland Department of Natural Resources, U.S. Fish & Wildlife



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

Service, and the Susquehanna River Basin Commission filed some minor exceptions to the decision, which are more editorial than substance, we could live with that decision just as it is. The next question was whether the Philadelphia Electric Company and its subsidiaries would file exceptions, which could take up to two years of what might also be called appeals.

We urged the president of the Philadelphia Electric Company not to file exceptions or appeal—it is not in their interests, and we asked their management to cooperate in the immediate implementation of this initial judge's decision so that the demonstration can now go forward. However, PECO went ahead and argued that fishlift improvement and expansion is premature and wasteful.

Shad moved into the tailrace at Conowingo during this year's early spring warm spell, and about 2,200 were moved upstream—above all four dams. Considering that more shad were attracted to Conowingo Dam than ever before, this is really a milestone. Since 1972, the trap catch of adult shad has been averaging only about 385 fish per year.

With a change in water temperatures, a second run came into the tailrace at Conowingo beginning on May 29, and it's fortunate that these were not spent shad, but still in pre-spawn condition. Before the run ended, about 5,200 shad were taken at Conowingo, with 4,265 of them hauled upstream above the dams. Twenty-six radio transmitters were implanted in the Conowingo fish stocked at Harrisburg, and except for the first batch released in early April, most of these fish began migrating upstream or spent considerable time in the release area.

One fish traveled up to the Beach Haven/Shickshinny area; several reached Sunbury, Selinsgrove, Halifax, and Dauphin; several moved about the Harrisburg area from the Dock Street Dam to the I-81 bridge crossing; and at least five fish were located in the Juniata River. These five covered a 50-mile reach from the mouth of the Juniata to Lewistown.

This is over double the amount of fish that have been moved upstream above Conowingo since 1972. It is quite probable that many of these are the result of eggs hatched and reared several years ago at our Van Dyke facility above Thompsontown. During 1981-1983, we stocked over 11 million shad fry and 163,000 fingerlings in the Juniata River.

Just as we predicted—it is working. To extrapolate these figures, the Maryland Department of Natural Resources estimates that over 21,000 fish were in the lower sections of the river in 1986, compared to an average of only 7,000 shad during 1981 through 1985. Richard St. Pierre of the U.S. Fish & Wildlife Service, coordinator of the Susquehanna River Anadromous Fish Restoration Committee, attributes the success to natural reproduction of transplanted adults and fry stocked from the Van Dyke Hatchery in 1982 and 1983.

The Pennsylvania Power and Light Company, Safe Harbor Water Power Corporation, and the York Haven Power Company all signed an agreement of settlement with the license intervenors in December of 1984, and have been cooperating in egg collecting, adult transport from other rivers, and in the expansion of hatching and rearing facilities. The Van Dyke facility is almost doubled in size, and the cooperation from the three upstream utilities has been outstanding.

We have to remind anglers that there is a moratorium on shad fishing in the Susquehanna and its tributaries, and that creeling shad there is illegal. But isn't it a great feeling that American shad are swimming again in the waters of the Susquehanna and its tributaries, thanks to the persistence over 100 years of the Pennsylvania Fish Commission and its allies? There have been many frustrations and "courtroom" battles. Yet, the American shad is coming home and we think that this year's record-setting figures are a good indication that it will not be long before shad are abundant in the Susquehanna once again.

Talph W. Phele

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The covers

This month's front cover, photographed by Angler editor Art Michaels, is a downstream view from the boat launch ramp at the Commission's Fort Hunter Access, just north of Harrisburg. The fisherman in the picture is going for catfish, carp, and smallmouth bass, which provide good action in this spot for shore fishermen and boating anglers.

This month's back cover, also captured on film by Art Michaels, is an upstream view of a lucky angler netting a nice one on the Delaware River about four or five miles north of Stroudsburg. Along these lines, there's useful information for boating anglers on page 9 of this issue.

Controlling the Sea Lamprey

by Robert M. Lorantas

The sea lamprey is a parasitic anadromous fish that gained access to the Great Lakes above Niagara Falls after construction of the Welland Ship Canal in 1829. The canal linked oceanic and Great Lakes shipping routes by circumventing Niagara Falls, and coincidentally provided the sea lamprey with access to the four Great Lakes above the falls.

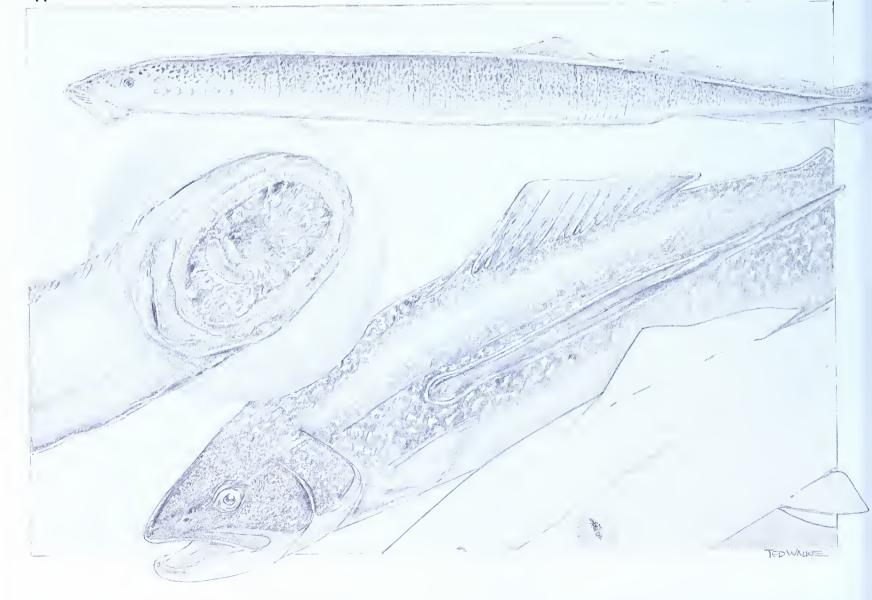
The first sea lamprey observed above the falls was reported from central Lake Erie in 1921, 92 years after the opening of the canal. In the 40 years following this first appearance, the sea lamprey rapidly

colonized Lake Huron, Lake Michigan, Lake Superior, and Lake Erie. Lake trout populations in lakes Huron and Michigan, although stressed by overexploitation, were virtually eliminated by 1950 due to sea lamprey predation.

In Lake Erie, lake trout populations were already at low levels by the early 1900s due to habitat deterioration and overexploitation, so the impact of the sea lamprey was largely imperceptible. In addition, water quality in tributary streams limited the availability of suitable sea lamprey spawning sites.

However, improvements in water quality coupled with the availability of

an abundance of prey species in the form of lake trout, Pacific salmon, and steelhead trout have lead to the identification of readily perceptible impacts of sea lamprey in recent years. These impacts were evidenced by the presence of fewer older and larger lake trout in assessment surveys, with a relatively high percentage of these trout (20 to 30 percent) bearing sea lamprey wounds. With the upper lakes sustaining the earliest and most damage from sea lamprey, extensive research and control efforts were focused on these lakes by U.S. and Canadian agencies in the 1950s. This team effort subsequently lead to the formation of the Great Lakes Fishery



Commission in 1955. The Commission was established by convention between the U.S. and Canada to formulate and implement sea lamprey control and coordinate fishery research throughout the Great Lakes.

How lampreys inflict damage

To appreciate the control and eradication efforts coordinated by the Great Lakes Fishery Commission, one must have an understanding of the biology of the sea lamprey and how it inflicts damage. An anadromous fish, it spends its adult life in a large lake or ocean and ascends tributary streams to spawn, after which spawning death ensues. The life cycle of the sea lamprey can be most conveniently described by partitioning it into four rather distinct phases: the larval, transformer, parasitic, and adult phase.

After emerging from eggs deposited in a crescent-shaped nest, larvae burrow into stream sediment where they live for three to seven years. These juveniles are blind and not physically capable of parasitizing fish. Larvae sustain themselves by filtering algae and other stream drift material.

When larvae reach a length of approximately 6 inches, they begin to develop eyes and a round suction-cup mouth with horny teeth. This transformation usually takes place in the fall or spring. After transformation, transformers leave their stream nursery area and migrate downstream. In this free-swimming stage they have the capability to become parasitic.

Parasitic phase sea lamprey attach to fish with their suctorial mouths, rasp a wound in the fish's flesh with their toothed tongues, and begin feeding on blood and other body fluids of the fish. Sea lamprey spend from 12 to 20 months in the lake parasitizing fish. Laboratory studies indicate that a single sea lamprey can kill 40 or more pounds of fish in that time. Although the primary prey of the sea lamprey are large salmonids, in Lake Erie they have been observed parasitizing walleye, yellow perch, freshwater drum, and other species. After attaining a length of 19 to 20 inches, adults drop off their hosts and ascend tributary streams in the spring

Although adult sea lamprey are occasionally sighted in a number of

tributaries to Lake Erie in Pennsylvania, only three tributaries support spawning populations. These streams, Conneaut Creek, Crooked Creek, and Raccoon Creek, are located in the extreme northwest corner of the state near the Ohio border. Surveys conducted by the U.S. Fish and Wildlife Service and the Canadian Department of Fisheries and Oceans indicate that densities of larvae in streams in Pennsylvania, New York, Ohio, and Ontario, which flow into Lake Erie, are of sufficient magnitude to require control measures. Conneaut, Crooked, and Raccoon creeks in Pennsylvania, together with streams in New York, Ohio, and Ontario, are scheduled for chemical treatment to kill lamprey in 1986.

This unified control effort is intended to reduce lake-wide populations of sea lamprey and improve survival of lake trout and other salmonids released into the lake. The ultimate goal of sea lamprey control on Lake Erie tributaries is to restore naturally reproducing populations of lake trout. Complete restoration will require many years of hatchery releases when one considers the slow-growing late-maturing characteristics of the fish and the resilience and effectiveness of the sea lamprey as a predator. The most sophisticated treatment measures have not eliminated sea lamprey from the Great Lakes. Most infested streams require regular treatment every three or four years.

TFM

Although restoration efforts have been slow on the upper lakes, progress has been steady. In 1958, perhaps the greatest impediment to lake trout restoration was removed when the selective chemical lampricide was discovered. The chemical 3-trifluoromethyl-4-nitrophenol, also known as TFM, was found to be very effective in killing lamprey larvae with minimal effect on other organisms.

The Great Lakes Fishery
Commission reports that rigorous
testing of the chemical demonstrated
that it: (1) had no long-term effect on
the environment or on forms of life
other than the one it is supposed to
control, (2) did not leave persistent
residues, (3) did not join with other
chemicals to form new chemicals with

hazardous effects, (4) did not constitute a health hazard to humans working with the chemical, and (5) did not have a long-term effect on human or animal life.

These results lead the EPA to approve TFM for use in the sea lamprey control program. Studies have shown that some invertebrates and fish are sensitive to this chemical and that some of these organisms may die during treatment. However, it has also been shown that recolonization by affected species is usually rapid, because only those portions of streams infested with sea lamprey are treated. Fish in spawning condition, such as trout and salmon in the fall, are sensitive to lampricide treatment and those spawners in poor condition may die during treatment. There is a general consensus, however, that any slight negative impacts are worth the benefits in lake trout and gamefish rehabilitation.

All TFM applications to streams in Pennsylvania will be made by a team of chemists and biologists from the U.S. Fish and Wildlife Service Sea Lamprey Control Laboratory. Pennsylvania Fish Commission personnel will assist in assessments of the abundance of larval sea lamprey during treatment. Actual treatment involves metering TFM into streams at rates necessary to produce a predetermined concentration for 12 to 24 hours.

During treatment, concentrations of the chemical in the stream will be continuously monitored at selected downstream sites. While in the stream, TFM may temporarily color the water a pale yellow. The times and dates of treatments will be made known to the public well in advance of treatment through the news media so that anglers and water users who wish to modify their fishing and water use activities may do so. Prudence would dictate that anglers not consume fish during treatment. Salmon fishermen who fish these streams should view any inconvenience due to treatment as worthwhile, because these efforts will serve to improve fishing in the future.

Robert M. Lorantas is a fisheries technician in the Commission Lake Erie Research Unit. He holds a bachelor of science degree in biology from Penn State and a masters degree in fisheries from the University of Michigan.

histration by Ted Walke

Some Thoughts Plagin

by Jim Yoder
photos by the author

he other night I took down Dad's old two-piece split bamboo casting rod from its perch between the basement joists. Its half-century accumulation of varnish was blistered even more than I'd remembered, but what memories that rod brought back! I practically grew up "pluggin'" with that rod in my hand on a little pond in Bradford County—Spring Lake, at the time the county's finest largemouth water, bar none!

l suppose a split bamboo like that was supposed to lend status or authority to its owner, and perhaps my father felt some of that once. It was completely lost on me. As I recall, it was a real bear to use; anything remotely resembling accuracy was an absolute coincidence! It was far from a joy to cast with. It had no action to speak of. It was just five feet of stiff, unvielding bamboo with which you sidearmed a big plug out across the pond, then burned your thumb unmercifully trying to sprag down the reel's wildly spinning spool before the lure landed in the brush. Its little beady agate guides, now deeply grooved from who knows how many thousand casts, were a sign of the times.

I suppose it was really quite handsome in its day. If so, that was its only redeeming value. Of course, a part of the great ceremony involved in each of these occasional inspections is another promise, as the rod is returned to its perch, to refinish that piece someday . . . and soon.

With that particular rod, often as not the terminal tackle was a big red and white Bass Oreno—seemed everybody had and used one. My earliest fishing recollections never fail to include that rod and one of those plugs. All that despite the fact that the first largemouth bass ever to fall for an artificial presentation of mine went for a rather nondescript, hollow-faced, generic surface popper that bore no brand name. Naturally, it was on Spring Lake. And with that catch, I might add, a lifelong infatuation with plugs, pluggin', and the fish that follow them had its beginning. To this day I find no greater pleasure than



This tiger musky tried to do in one of the author's offerings on a pluggin' foray.

plugging a stump-filled pond of weeds and spatterdock.

I still have that plug! s soon as we purchased any new plug, a twist of the pliers reduced all its treble hooks to "up riding" doubles and as a consequence we brought the lure back to the boat more often than might have been possible otherwise. Even so, we spoiled a good deal of fishing with our plug-salvaging antics, but we never left a lure behind if there was any way on earth to retrieve it. Still, we well knew the time would come when a lure would inevitably be lost. And after a good plug had been snagged and successfully retrieved some unspecified number of times somehow you just knew when the time arrived—it was "retired" before its luck ran out. You just felt it was too valuable to risk any longer. Never mind that it never caught another fish lying there in the tackle box!

We plug-tossing anglers always were and still are a fortunate lot, given the array of lures set before us. And I've enjoyed every minute of it. It wasn't difficult keeping track of lures and their makers back when I was a kid. Unlike today, there were only a handful. Creek Chub Bait Company, James Heddon's Sons, South Bend, and Pflueger were some of the very early ones, but only the former three survive of that group. Heddon dates to 1894; I don't really know when the others had their beginning.

In time, many others were to join their ranks. Arbogast, for example,



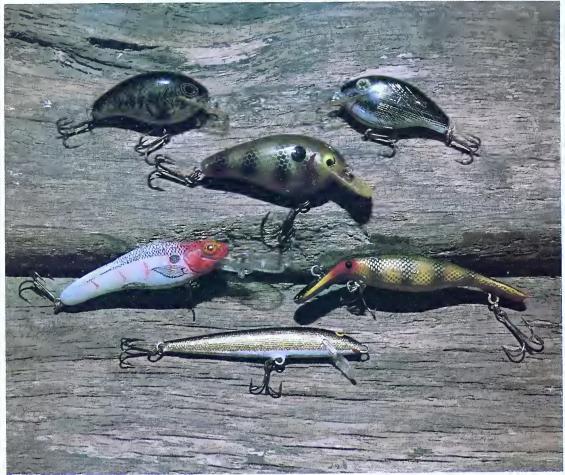
came into the lure-making picture a long time ago, though I don't have the beginning cataloged. Their Jitterbug, it would seem, could well have come into existence at the peak of the dance craze bearing the same name—its action supposedly not too unlike some of the dancers of that day. Late 30s? Maybe. If so, that lure is fast approaching a half-century of catching fish . . . an awful lot of fish! The Jitterbug and a host of other old reliables still remain favorites among a legion of anglers. I've never been without one—don't intend to be.

For that matter, I don't recall ever not owning a Bass Oreno, although today I prefer the Midge Oreno, which is about the same critter sealed down to lighter spinning weight. Then, too, I've never been without an assortment of other oldies and goodies: Creek Club Pikies, Heddon Vamps, Sonies, you name them. Yep, and they're right in there alongside my Bagleys, Bombers, Cotton Cordells, Rapalas, Rebels, and oh, good grief, we could just go on and on!

Just when Helin introduced the inimitable Flatfish is another of those

elusive dates, but it seemed that all of a sudden they were upon us in a myriad of sizes, colors, and "numbered" patterns that defied description. And each "number" had its following. I recall vividly a particular era in our upstate fishing history when the Flatfish enjoyed a popularity that was the envy of all lure makers.

Somewhere around the time the late 50s were giving way to the 60s, it was the lure of choice among the bass and walleye fishermen on the Susquehanna River in Wyoming



County. At about the same time down in neighboring Luzerne County, a totally differently sized, colored, and patterned Flatfish than anything used up on the river was hauling up great rainbow trout from the depths of Harveys Lake. Out in northwestern Pennsylvania, muskies and northerns readily took Flatfish.

And still we looked forward to new introductions. Were we looking for some "super" lure? Could be. There was always the threat of gimmickry to be wary of, and when a new plug hit the market—and the water—it was watched anxiously . . . suspiciously. If it "took hold," dealers were quickly sold out and you had to wait for their next shipment!

It was inevitable that even a hot lure would give way to a flashy newcomer. Sometimes a newcomer proved to be but a flash in the pan—others were forever.

On the largemouth bass ponds, some Bass Orenos were giving way to the gurgle of the Jitterbugs, then the swishing tails of the Hula Poppers and some converts never went back to their first loves. At one time, not too many anglers ventured forth on the Susquehanna without creations like Pflueger's Pal-O-Mine Minnow or Heddon's River Runt—the arrival of

the Flatfish sent a good many of these to the shelf. Then came the "sealy" Finns, the Rapalas. The Rebels followed closely on their heels (make that tails). Soon even the fabulous Flatfish began to lose favor. Some anglers never took up the old plugs again. The newcomers proved to be great fish takers and that, after all, is the name of the game.

But favorites are still emerging from within the many lines of tackle manufactured today, and it seems that some anglers become enamored more of a plug's composition than its design. There's the "balsa is best" school, the "can't beat cedar" crowd, and the group that feels more comfortable with some sort of spaceage plastic.

Personally, I find them all beauts. But however well-conceived, designed, and tested, plugs are no more than imitations, and none is infallible. Some will only perform a percentage of the tricks their makers claim and even fewer claimed by their users. With few exceptions, however, I've owned very few plugs that didn't catch fish. Admittedly, some caught far more than others.

Despite annual attrition to stump roots and other lure-snagging bottom debris, my tackle assortment, with but occasional replenishment, still manages to fill three tackle boxes with the top shelf of an old jelly cupboard in the basement holding my overflow. Some of the lures hanging from the edge of that shelf are no longer "active" . . . for a variety of reasons, most of which are sentimental. There's that old popper I mentioned earlier. Mercy! You just don't let a plug like that get away from you. Do you?

Then there's a little flat Rebel I've long since forgotten its name, but it seems someone once called it a threadfin shad. It had never even as much as met a fish until one day a beautiful little tiger musky tried to do it in! Though little more than a keeper, that fish still outweighed that plug hundreds of times. He flattened hooks that were in the way and nearly completely straightened out the only "branch" of the little size 8 treble that held him. And you want me to risk losing that lure trying to catch another fish!

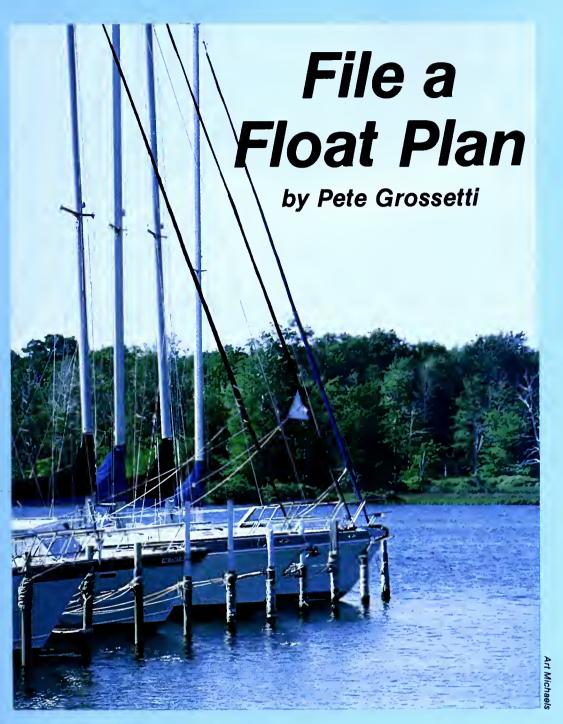
Then there's Dad's old Heddon Game Fisher. Ever see one? It's got a little Beno, Flatfish, Lazy Ike, and some Swim Whizz in it—although it unquestionably predates all of themexcept it's in three sections with two separate joints. Don't ask me why, but I've never fished it . . . haven't had the nerve. Nor can I recall ever seeing my father tie it on! Beautifully formed and fitted, the cracking of its many coats of enamel with the passing of time only adds to the regal air it casts over the "commoners" at its sides. Now you just do not, repeat: Do not risk sacrificing that plug on some underwater altar just to catch another fish!

I concluded that there was only one antidote for this attack of nostalgia: I went out and bought a brand new Flatfish (sure I've got oodles of old ones, but I didn't have this finish . . .), a new Jointed Pikie Minnow (I can surely fill an entire Plano with Pikies only, but I didn't have a blue one!), a Midge Oreno in a new finish, and guess what? I'm going to fish them . . . nothing but them in 1986! This will be the Year of the Oldie!

Besides, my Rebels can use the rest.



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earches for overdue boaters often end in bars. Many boaters finish a day of boating by visiting the local pub. The problem is that they never told anyone where they'd be, and the search goes on and on.

If you plan a special social stop before heading home from the launch ramp or marina (and you don't mind letting your spouse in on the secret), make sure someone knows about it. A quick phone call can prevent a long, expensive search — and worry by those waiting at home.

Boaters can take a tip from aircraft pilots and possibly save themselves from turning a day of enjoyable boating into a frightening overnight ordeal. A pilot files a flight plan before leaving the ground, and then closes it out at his destination. This gives the Civil Air Patrol or other search units a headstart on determining if an aircraft is missing and where it might be. The same idea can work for boats.

A float plan is much less formal than its airborne equivalent. The elements of a good float plan include locations, times, and gear.

List as complete an itinerary as possible. Start with the launch site and the places you intend to cruise. If it's a fishing trip — and because fish have been known to be uncooperative at times — you might move around or may change your route completely. Often, fishing is better in one location in the morning, another in the early afternoon, and still another around dark. If this is the case, give some clues about your plan of attack.

The boat and equipment you carry

should be the most detailed portion of the plans. Start out with the description of the boat. This gives the rescue teams an idea of what they are looking for. But remember that there are a lot of "17-foot outboards" cruising on some waterways. Besides listing the length and engine type, be sure to include the color (both the hull and the trim), construction, registration number, and by all means, the number of people on board. You can make up your own form with blank spaces for the information that varies from trip to trip. This will save you from having to redo the entire plan each time you get under way.

If you own a trailerable boat, you will want to give a description of the car and trailer, including the license number. If they are not at the launch site, the search may be expanded beyond the starting point. The Coast Guard usually completes a telephone harbor or marina check before any search units get under way.

If your boat is equipped with a radio transceiver, list the frequencies on which you can be contacted. Even if you just bring along a transistor AM radio to pick up the ball game or a little Mozart, list the radio station you listen to. Search units often work directly with radio newscasters to contact missing boaters.

The emergency equipment you carry can make a great difference on the type of search carried out. A search for a boat carrying flares, for instance, will surely continue throughout the night. A search for a boat with smoke signals or water dye can be handled by longrange, high-flying aircraft. There's never too much information you can supply in the float plan.

Unfortunately, the Coast Guard has neither the facilities nor the personnel to accept float plans from the skippers of the estimated 3 million registered boats on the Great Lakes, for example.

Leave your plan with a responsible friend, relative, or neighbor, and be sure to close out the float plan when you return to shore or home. If you're out fishing, you may consider offering your float plan holder a share of the catch. He'll be sure to know you're home then!

Petty Officer Pete Grossetti is currently assigned to the Coast Guard Ninth District Boating Safety Division, Cleveland, Ohio.

Fly Fishing During the Dog Days by Jeff Mulhollem og days. As defined by Merriam Webster's dictionary, the term refers to the period between early July and early September when the hot, sultry weather of summer usually occurs." A second dictionary definition, which may seem especially appropriate for trout fishing during the dog days, calls them a "period marked by a dull lack of progress.' But for a well-prepared fly fisherman, late summer can be a productive, enjoyable time to be astream. There are a few reasons. First, fishing pressure on most Commonwealth trout streams drops off noticeably after July 4. Many anglers turn their attention to warmwater species, becoming discouraged at their inability to catch trout after the major mayfly hatches conclude. Secondly, the dog days offer challenging dry fly fishing, and most of us agree we'd rather fish with dries. During the late summer, surface action is nearly continuous with trout taking terrestrials and aquatic insects.

Even when no rises are evident, fish can often be enticed to take a dry fly.

Thirdly, when water levels fall, previously hidden natural features like rock ledges and springs erupting into the stream bed become obvious. The lairs of big trout can more easily be located. Dog days fly fishing for big trout becomes almost like a big game hunt.

But make no mistake — fly fishing during the dog days is demanding, difficult, and often frustrating. Still, with proper preparations, it can also be rewarding. Perhaps by following these suggestions you might eagerly await rather than dread fly fishing during the dog days.

The caddis

Many novice fly fishermen become obsessed with imitating the mayflies that hatch in May and June — Quill Gordons, Hendricksons, and Light Cahills. When trout begin disdaining these offerings in late summer, they become discouraged.

On many streams, the dog days are dominated by hatches of caddises, and common mayfly patterns will not fool trout in August when they are feeding on caddises. Caddis imitations are easy to tie, and during the dog days in Pennsylvania, fly fishermen should carry a selection in hook sizes ranging from 14 to 20.

Effective patterns include fluttering, elk hair, tent wing, and delta wing caddises in a variety of colors. Green, tan, brown, gray, black, and cream caddises are best.

Terrestrials

Late summer is a time when land insects are most active. Wind and gravity combine to make their presence in trout streams common, and trout are continually on the lookout for choice morsels.

Although grasshopper fishing seems to attract the most attention among fly fishermen, if I had just one pattern to use during the dog days, I'd pick a size 18 ant imitation in cinnamon or black. I remain partial to simple patterns using spun fur, but deer hair and cork-bodied McMurray ants are better in some situations. Even fish rising to a hatch of caddises or mayflies often accept a carefully presented ant.

Still, don't venture out without at least a handful of other terrestrial

patterns. Beetles, inchworms, crickets, and jassids are all flies that can save a dog day for a smart fly fisherman.

Regarding hoppers, don't be without a few of those, either. A windy late August or September afternoon on a meadow stream stretch can make your hands shake when big trout begin nailing grasshoppers. Good patterns include a dry muddler, Joe's Hopper, Letort Hopper, and deer hopper. If you find hoppers difficult to tie, buy a few in sizes 8, 10, and 12. Some dog day it will pay off.



Midges and gossamer

Too many long-rodders won't use flies smaller than size 16 or leader tippets lighter than 5X or 6X, saving midge fishing for the "experts." Too bad. When streams drop and become clear in late summer, occasionally a tiny fly on a 7X or even 8X tippet is needed to match a hatch.

It's true that such fine terminal tackle increases the odds in favor of the fish, lessening the chances of a hookup and increasing the odds of a break-off. But the worst thing that can happen is a lost trout. The alternative in some cases is no action at all.

In some areas, it is difficult to buy midges even at a tackle shop. So if you feel you can't tie tiny flies, try mail order or buy a few from a friend. If the thought of tying wings on a size 20 hook is all that's bothering you, tie your midges wingless in cream, black, brown, tan, olive, and gray.

Nobody — not even the "experts" — can see a dark-colored midge on

riffled water 30 feet away. Just concentrate on where the fly should be and strike at any hint of disturbance. It could save a dog day.

Stocking schedules

Since the Fish Commission began its Operation FUTURE management program several years ago, one thing has become very clear. Waters stocked with trout latest in the spring provide the best dog day angling. The reason is simple. By late May, many of the truck followers have lost interest in trout fishing, and some of those who haven't don't have the expertise to catch trout stocked into low, clear water.

So find out which streams in your area were visited last by the "great White Fleet." You might have a doggone good time on one, casting over more fish than you would have believed.

Don't avoid darkness

If you have a choice of when to fish during the dog days, choose early morning and late evening. Save the afternoons for yard work. During August and until the weather cools in September, hatches usually occur only during the first and last hours of daylight.

The best late summer fishing often occurs at night, long after most anglers head for home. Get in the habit of carrying a small flashlight, or better yet, purchase a pin-on lamp like a Flexlite and keep it attached to your vest. These devices allow easy changes of flies and tippets at night, leaving both hands free.

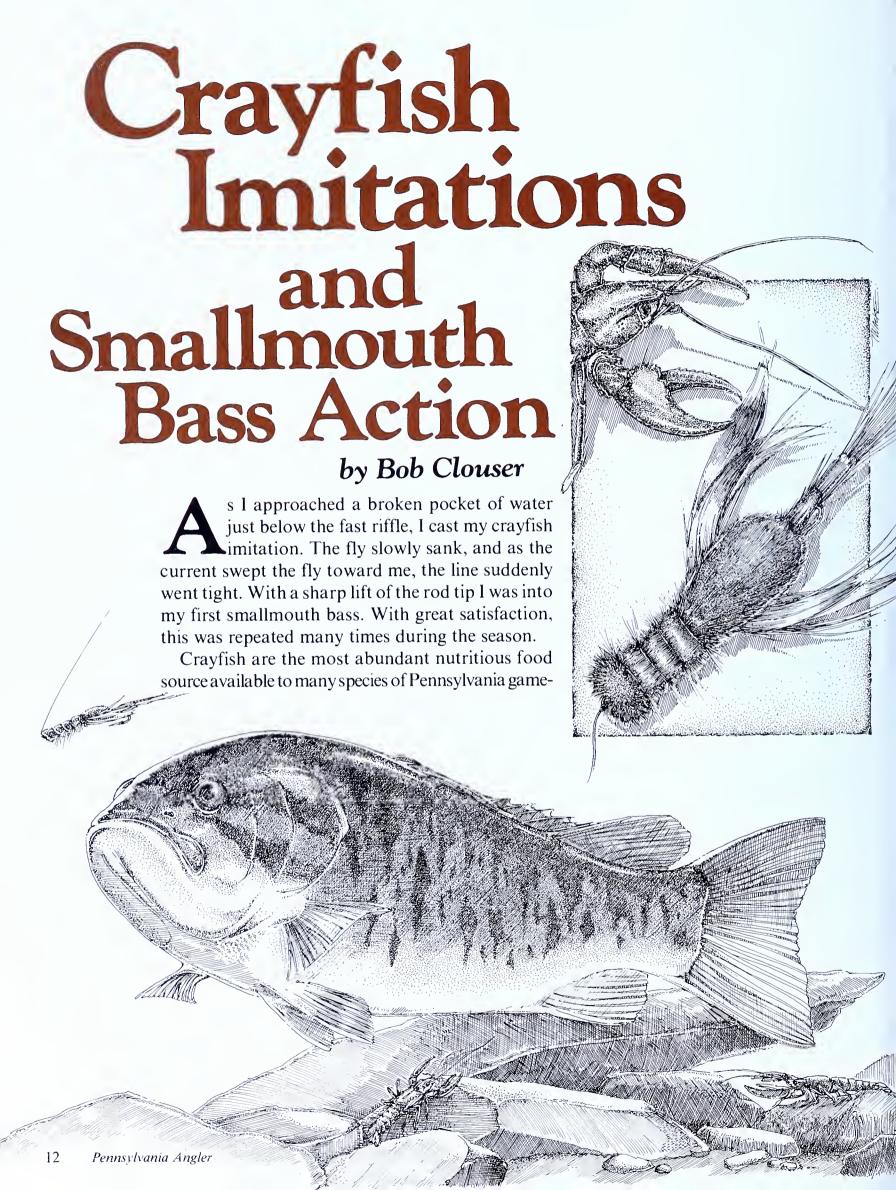
Plan to fish sections of stream you are familiar with so you don't take a spill wading in the dark.

Nothing is so exciting as hooking a big trout on a dry fly at night. You hear a splash, strike instinctively, and the fight is on. Large wet flies like wooly buggers, streamers like Dave's sculpin, and high-floating dries like humpys or Wulffs are good choices for night fishing.

In August and September, you may have to work a little harder to catch fish, but it's worth it for the action you can enjoy.



Jeff Mulhollem is outdoor editor and an environmental reporter for the Altoona Mirror.



fish, especially the smallmouth bass.

In early spring as the water warms, this coldblooded crustacean comes out of hibernation. At this time, they are stained by the decaying debris in which they have lived. Most are dark in color then, ranging from greenish-blue to mottled black and brown.

In a few weeks, their color changes to light olive, then to a brownish-olive shade. As they grow in size, they go through several molting stages. They burrow in soft mud or decaying debris. The entire crayfish becomes soft and helpless. It's one of the most favorite foods of the smallmouth bass at this developmental stage.

I love to fish for smallmouths with a fly rod, and I also enjoy tying my own flies. A natural outcome was to produce a crayfish pattern that has been deadly. Since the introduction of this pattern, five years ago, I've produced more than 5,000 of them.

Smallmouths gorge themselves on young crayfish. I found smaller size imitations more productive. From one to 1½ inches in length they are at their softest texture. As they increase in length, the carapace and abdomen covering become much harder.

Color and habitat

Crayfish colors vary. Habitat, such as muddy or clear water, affects a noticeable change. They have a greenish cast if they live in a grassy habitat, brownish shade on a silted bottom, and a blackish-brown mottled color from living in a lava and ironstone environment. It pays to check your favorite stream for the proper sizes and colors that are most abundant.

I use a few color combinations during the season. In early spring, a darkolive back with a very light pale-green underbody is a good choice. In late spring, crayfish carry an orange egg mass under their abdomens, and you can imitate this by using orange dubbing under the abdomen of your imitation. During the summer months, a tan or olive-brown back covering with the pale-green underbody provokes the most strikes.

Tackle

Crayfish live on the bottom, so you must weigh your imitation or add weight to your leader and present the fly properly on the bottom. Bottom-bouncing catches many more bass.

I prefer an 8½-foot to 9-foot rod cap-

able of handling 7-weight or 8-weight fly line. For most conditions, a weightforward floating line is sufficient. Sinktip lines with a very short leader get the fly down in deep fast pockets.

I use two special leaders that can be attached to a floating fly line. One is a 10-footer, made from Maxima leader material. It's a four-section leader designed to sink quickly and prevent dragging of the fly.

This leader gives me a faster sink and a few more yards of natural drift. You can make it by using this formula for leader material and lengths: 30 inches of .015-diameter, 30 inches of .012-diameter, 30 inches of .010 diameter, and 30 inches of .009-diameter or 6-pound-test for the tippet.

It is not necessary to have a thick butt on the leader to cast weighted flies. The movements of the weighted fly turns the leader over.

Another leader for shallow, fast water up to 4 feet deep that can be attached to your floating line is one designed by a good friend and small-mouth fly rodder from Maryland, Bill Anderson. This is a sinking leader that can be attached to a floating fly line with a loop connection. Attach to the floating fly line 36 inches of fast-sinking fly line. Match the weight of the sinking line to the weight of the floating line. Attaching 24 inches of leader material completes the leader.

When fishing 4-foot to 10-foot depths, you can modify the rig by using the floating line plus the 3 feet of fast-sinking line, to which is attached 18 inches of 15-pound-test monofilament leader material. Loop to the 15-pound leader 6 or 8 inches of LC-13 (13 grains per foot) lead core line. Finally, loop 20 inches of 6-pound-test or 8-pound-test monofilament to the LC-13, which completes the leader.

This leader is very useful when using wooly buggers, muddlers, sculpin, and crayfish imitations.

Fishing strategies

Different methods of presentation let you be successful throughout the season with crayfish counterfeits.

The most productive is the dead drift. This is an upstream cast, allowing the fly to sink to the bottom, letting the water flow bring the fly back to you naturally. You must point the fly rod directly at the line where it enters the water and with your line hand retrieve all slack line from the water. This keeps

you in contact and control of the fly, and if you get a strike, you instantly see or feel the stopping of the drift. Then you strike immediately.

In the up-and-across method, cast the fly slightly upstream and across. Short casts are easier to control. As the fly starts its downward drift (the fly must bounce bottom to be effective), follow with the rod tip a little ahead of the drifting fly line where it enters the water. Never let the line drift ahead of the rod tip. This causes unnatural drift. As the line drifts past you, slowly lift it from the water by stripping line or by raising the rod tip. Watch the line where it enters the water. When a strike occurs, the line simply stops moving. Sharply lift the rod tip to set the hook.

At times, stripping the fly is needed to provoke strikes. Cast the fly upstream or across and as the fly drops to the water lower the rod tip toward the water, pointing it directly at the fly line. Start a stripping retrieve of about one foot of line with each pull. This causes a darting motion of the fly. When a strike occurs using this method, you feel a hard solid tug. This technique is effective on shallow flats and gravel bars.

When using imitations of bottom-dwelling nymphs, crayfish, hellgram-mites, or sculpin, add enough weight to the fly or leader so that it drifts properly near the bottom.

Many rivers and streams in Pennsylvania abound with smallmouth bass. The Susquehanna is top-notch with its many shallow flats, gravel bars, grass beds, riffles, and rock-covered bottom, all of which are prime smallmouth bass habitat. Areas below dams are ideal. The slow, deep water with a mud-silted bottom, which occurs above dams, is not good smallmouth bass habitat.

Here is a list of other streams within reasonable driving distance of the Harrisburg area, where I live. I recommend these waterways highly:

- Juniata River and Shermans Creek flowing through Perry County.
- Swatara Creek in Dauphin and Lebanon counties.
- The Conestoga and Conewago creeks in Lancaster County.

These waterways are only a few of the streams in the state that contain small-mouth bass, so the next time you take a walk along your favorite stream, string up the fly rod, tie on a crayfish imitation, and drift it through a deep pocket or riffle. You could be in for a new fishing experience.

County Features

Wyoming, Clinton, and Jefferson Counties

Wyoming County

by Steve Shabbick

yoming County represents 502 square miles of the Commonwealth's total area, and stands as the "Gateway to the Endless Mountains."

Although small in area, it doesn't take a back seat in providing anglers plenty of good fishing. There are cold mountain streams for the trout fisherman, and the North Branch of the Susquehanna and two warmwater streams abound with panfish, bass, walleye, and muskellunge.

If your interest is trout, Wyoming County has eight approved trout streams with almost 76 miles of fishable water. Another 19 tributary streams support native brook trout populations, and rainbows reproduce naturally in one tributary. If you enjoy lake fishing for trout, there are three approved lakes stocked annually by the Commission's "Great White Fleet." For the purist, year-round fishing is available in an area of Bowmans Creek designated for fly fishing only.

Finding a stream to your liking doesn't pose a problem, considering that within an eight-mile radius of Tunkhannock, the county seat, you'll find a trout stream to test your fishing skill, or let you relax and enjoy the scenery.

North Branch Susquehanna River

The Susquehanna provides 39 miles of fishable water abounding with smallmouth, walleye, muskellunge, and channel catfish. With all the new lures available, hellgrammites and stonecats still produce best from May until November. Later in the year, minnows outproduce other baits. A Fish Commission access area is located about a mile south of Tunkhannock. The Susquehanna in Wyoming County is very good for float fishing, with a few rapids but none that would be considered dangerous.

Tunkhannock Creek

Tunkhannock Creek parallels Route 92 from Tunkhannock to Nicholson. The stream is too small for boats, but canoes can make it downstream. June and July are the best months for smallmouth, walleye, and rock bass. The best baits to use here are spinners, small twister tails, and spinner-worm combinations.

Stevens Lake

This 62-acre Commission-owned lake is located on Route 29, 5 miles north of Tunkhannock. Only electric motors are permitted. Largemouths, pickerel, bluegills, crappies, and builheads are available in good numbers, and fall fishing produces the best results. Surface plugs worked in the events and after dark for bass are good. Double-bladed spinned take lots of pickerel, and small white or yellow twister. It is work best on crappies.

Lake Winola

Located along Route 307 between Osterhout and Mill City, Winola offers excellent trout fishing as well as good warmwater fishing. The 198-acre lake has an access area and a parking lot near the Winola Inn. The lake is stocked with palominos and rainbows, as well as a few browns and brookies. Night fishing for trout is excellent at Winola. The best baits are small worms, corn, and tiny marshmallows.

Winola also offers good bluegill fishing, as well as some largemouth bass and perch action. The best times to fish are before or after the boating season. During July and August the lake receives heavy motorboating pressure.

Lake Carey

This 260-acre lake is located 3 miles north of Tunkhannock on Route 29. Carey is stocked with rainbows and brook trout, and also has good populations of largemouth bass, pickerel, perch, bluegills, and crappies. An 18-inch crappie was caught here in 1985.

The best trout baits are salmon eggs, worms, and minnows, and the best times for trout fishing are spring and winter. A small fee is charged for launching at Frank's Marina.

Oxbow Lake

This 60-acre lake is located in a primitive area. No boats are allowed, and access is walk-in only. To reach Oxbow Lake, go north out of Tunkhannock on Route 29 for approximately 5 miles. Make a right onto L.R. 65017, and proceed for about 3 miles. The lake is on the right.

Oxbow is stocked with rainbows, palominos, brooks, and browns. The best baits for trout are worms, corn, and small marshmallows. Light lines in 2-pound or 4-pound test seem to produce better. The lake also has good populations of largemouths, perch, and bluegills.

Bowmans Creek

Like many of the larger trout streams in Wyoming County, Bowmans Creek is float-stocked both preseason and inseason with brookies, browns, and rainbows for a distance of 16 miles. Routes 309 and 29 parallel the stream from Tunkhannock south to Noxen. From Noxen, use L.R. 63001 to continue upstream.

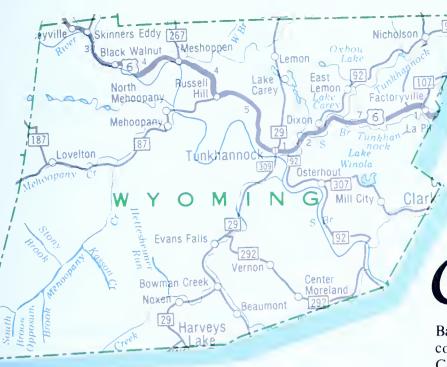
Bowmans also has a fly-fishing-only area, located between Evans Falls and Tunkhannock. The area runs for a mile downstream from the bridge on Route 292. Wet flies produce best in this area during the early season. From June to October, dries work best, especially March Browns, Light and Dark cahills, and brown or yellow wooly buggers.

Mehoopany Creek

Mehoopany Creek runs along Route 87 west of Mehoopany to Forkston, then west along L.R. 65046 to the state game lands. Although stocked with brown trout, the headwaters offer good native trout fishing to anglers willing to walk in. Early in the season, worms, spinners, and salmon eggs produce best. Wet and dry flies as well as streamers also take their share of trout.

South Branch Tunkhannock Creek

This stream is stocked from the village of Factoryville to



Bardwell along Route 6, a distance of almost 6 miles. The stream receives browns, rainbows, and brook trout, and is best fished early in the season. During July and August, the water gets quite warm. Baits that work well include spinners, worms, salmon eggs, and minnows.

Meshoppen Creek

Almost 9 miles of this stream are stocked with brook, brown and rainbow trout from Meshoppen eastward to the Susquehanna County line. To reach this stream, take Route 6 to Meshoppen, then proceed north on L.R. 65037 to Route 29. The best action occurs between April and June with spinners, salmon eggs, and minnows producing best.

Horton Brook

This small stream is about 3 miles long, one mile of which receives a float stocking of brook trout. Use worms, minnows, or small spinners to take these fish. To reach Horton, take Route 92 to Nicholson, then proceed north on L.R. 65026.

North Branch Mehoopany Creek

Route 87 parallels this stream from Mehoopany all the way to the Sullivan County line. Stocked with brooks, rainbows, and browns, this stream produces best in the early part of the season. Minnows are the best bet here for bait.

Some of the better native trout streams include Beaver Creek in Noxen and Overfield townships and a number of small streams located in State Game Lands 57, between Forkston and Noxen. For anglers willing to walk to small but secluded waters, Becker Brook, Bellas Brook, Stony Brook, Cider Run, South Brook, and Opossum Brook all hold good native trout populations.

Steve Shabbick is the Wyoming County waterways conservation officer.

For trout fishing action in Wyoming County, give these streams a try: Bowmans Creek, Mehoopany Creek, Meshoppen Creek, and the South Branch of Tunkhannock Creek.

Clinton County

by Jay B. Johnston

linton County is a sparsely populated area of 902 square miles. Some 90 percent of the county is forested and 52 percent of it is state-owned.

Warmwater fishing is limited to Kettle Creek, 15 miles; Bald Eagle Creek, 12 miles; and Pine Creek, 4 miles in the county from its mouth upstream, where it enters Lycoming County.

Bald Eagle Creek's 12 miles have fair to good fishing for carp, panfish, smallmouth bass, walleye, and muskies. The best month is October. From Lock Haven to Beech Creek is the best section. The stream parallels Route 150.

Pine Creek's 4 miles from the mouth upstream offer good smallmouth bass, panfish, and some walleye action.

Alvin R. Bush Dam, 160 acres, is stocked with trout, but has good populations of smallmouth bass, perch, and bullheads. Because they are seldom sought, some very nice smallmouths are caught there each year by those few who specialize in fishing for them.

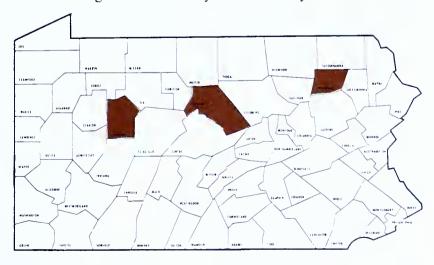
The county is blessed with trout habitat. Here are some of the favorites.

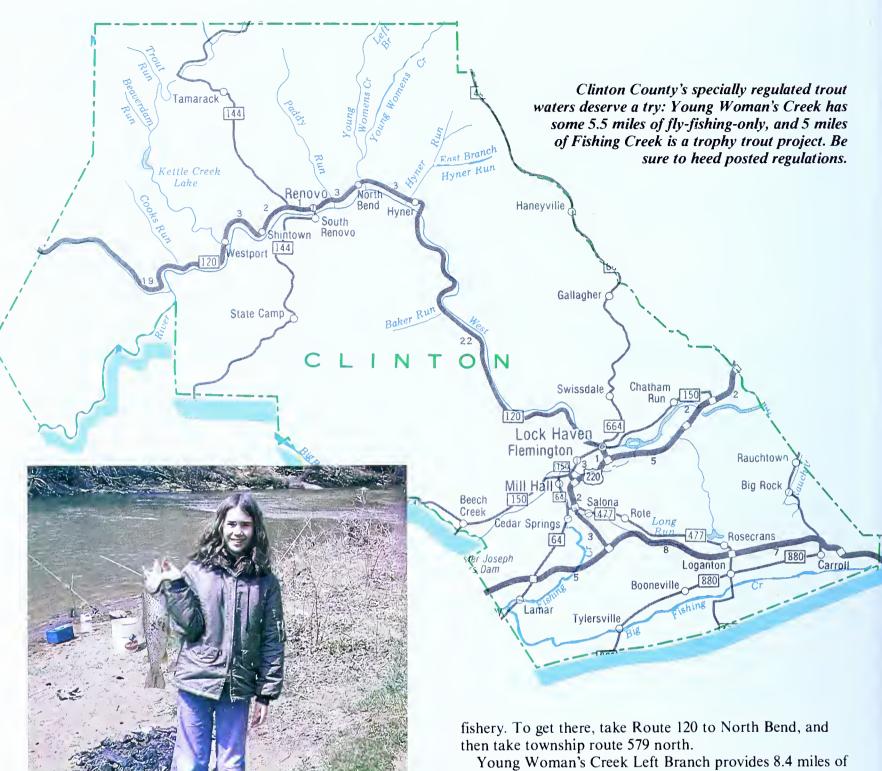
Bush Dam and Old Kettle Creek Dam

Both waterways are stocked with rainbows and palominos. The favorite methods are trolling wet flies, casting spinners, or still fishing with tiny marshmallows topped with a meal worm or salmon eggs. Camping is available at the lower or upper campgrounds of Kettle Creek State Park. To get there, take Route 120 west from Renovo to Route 4001 at Westport.

Kettle Creek

This stream is stocked from Bush Dam 13 miles upstream to and beyond the Potter/Clinton county line. Although big water, this freestone stream is noted for its ease of fishing and excellent fly hatches. Early in the season,





minnows, eggs, spinners, and worms all take fish. The best months are April and May, because this stream warms quickly. It is reached via Route 120 west of Renovo to Route 144 north. Camping is available at Kettle Creek State Park.

Beaverdam and Trout runs are both stocked for about two miles with brook trout. There are wild trout in both, also. These streams are tributaries to Kettle Creek, and are reached via S.R. 4001 off Route 120 at Westport.

Young Woman's Creek

Young Woman's Creek offers 10.7 miles of freestone fishing. It is stocked preseason above and below the 5.9-mile fly-fishing-only area. The FFO area is a wild trout

Young Woman's Creek Left Branch provides 8.4 miles of fishing, and it is stocked preseason and inseason. This stream also has a wild trout population. Flies, spinners, and bait are all good here, and fishing is productive right through summer. A forestry road parallels the stream.

Hyner Run, Hyner Run Right and Left branches

These waterways are stocked preseason and inseason, and they also have wild trout. Hyner Run State Park is great for camping. Take Route 120 to Hyner, and then follow S.R. 1014 to the park entrance. A forestry road parallels the stream for easy access.

Long Run

Long Run is 4.7 miles long, and is stocked preseason and inseason with brook trout. It, too, has wild brook and brown trout. The waterway is paralleled by Route 477. To get there, take exit 27 of 1-80 at Loganton to Route 477 north. The stream is stocked from below the old CCC Dam to the town of Rote. Its fairly fast water will challenge fly and bait fishermen alike.



Fishing Creek

This limestone stream has it all — stocked trout from the mouth of Cedar Run downstream about 4 miles through the town of Mill Hall. It contains some good holdover and wild browns in this section. Minnows, worms, or flies are the best offerings for the wild browns. Those baits plus spinners and salmon eggs are good for the stockies. To get there, get off exit 27 of I-80 to Route 220 west to Route 64, which parallels the stream.

About 10 miles upstream from the mouth of Cedar Run at Salona to Flemings Bridge, Fishing Creek is a wild trout fishery. There is little fishing pressure, but the stream contains some nice wild browns, and brook trout appear as you near Clintondale. The angler who can match what the fish like will do well here. Muddlers, minnows, flies, worms, and crawlers are the favorites. A road parallels the stream for convenient access.

About 5.5 miles from Flemings Bridge upstream to the Commission's Tylersville Hatchery is a special regulation area for trophy trout. Consult your summary and posted signs if you fish here. Still, here you'll find probably some of the best wild brook and brown trout fishing around. The area is also known as the "Narrows." Some of the trophy trout area is posted "No Sunday Fishing," so be sure to observe these regulations.

For those who can handle artificial lures or flies, spinning and fly gear is permitted here, and it is a must. The waterway can be reached via exit 25 off I-80, then west to Lamar. About a quarter-mile from the Lamar Post Office, turn left on S.R. 2002, and follow this road about two miles and you'll cross Fishing Creek.

There is good fishing here all year. From the trophy area upstream 8.7 miles to the vicinity of Carroll (Exit 28, 1-80), Fishing Creek is managed as a wild trout fishery. General regulations prevail, and most normal trout fishing methods work.

Some parts of this stream (above Cedar Run) sink below the stream bed during the summer months. Don't be discouraged — just go up or downstream a ways and you will find running water. The trophy area flows year-round.

Other stocked streams include Cooks Run for four miles, Route 120 to the forestry road. About 11.5 miles west of Renovo, fish above the Rock Run confluence (polluted below). Baker Run is off Route 120 west of Lock Haven and offers about 17.5 miles of good fishing. Rauchtown Creek, another good bet, can be reached off exit 28 (I-80) at Carroll, then 880 north to Ravensburg State Park.

There are 10 wilderness trout streams in the county. These streams are not stocked and have few access points. If you don't mind climbing down or up mountainsides, don't mind not seeing people, and don't mind finishing your day with nickel-sized blisters on your feet and most often trout less than 9 inches, these would be just the ticket for you. Two good ones are Lick Run (10.5 miles between roads), between Haneyville and Farrandsville (Route 44), and Cherry Run (7 miles between roads), which enters Fishing Creek at the Porter Township — Logan Township line.

Jay B. Johnston is the Clinton County waterways conservation officer.



Jefferson County

by Porter Duvall

As with most mountainous Pennsylvania counties, Jefferson County carries its own unique brand of beauty. Rolling foothills to short ridges make the frame for its many miles of streams, which range from small native brook trout waters that you can step across to rivers such as the Clarion. Due to the geology of the area, all the streams are basically freestone. The primary wood of its heavily forested hills and valleys is oak, while the streams are for the most part lined with hemlock.

This is basically the start of the county's trout country as one heads north from the Pittsburgh area into the northcentral area of the state. While the hatches coming off our trout streams may not be as heavy as those on limestone waters, they are no less important.

From April on, the persistent fly fisherman can find trout feeding almost every day until ice over. In spite of the terrible effects of acid rain deposition, our streams have been able to withstand man's intrusion, and with some help of the Fish Commission's Operation FUTURE provide excellent recreational opportunities for all.

Cloe Dam

This waterway is 30 acres of cold, deep water tucked away north of Punxsutawney. It provides not only a good park-type fishing area. On those stormy, flooded first days, sometimes it is the only place to fish. Basically a rainbow trout fishery, it provides excellent fishing throughout the year. During the warm summer months, many trout fall prey to deep-run Christmas rigs at night. Fall provides some excellent trophy fishing as those big trout cruise the shorelines.

North Fork of Redbank Creek

For most of the local fishermen, this stream represents just what a trout stream should be. It starts on game lands high up west of Brockway and travels through some scenic areas. Brook trout are the most predominant species. More and more fishermen report brown trout holding over and increased insect hatching. The bottom two miles of the stream are a delayed-harvest fly-fishing-only area to Route 322 in Brookville. Many areas of the North Fork are walk-in due to limited access. The Moore Bridge access provided by the Fish Commission is an excellent starting point.

Redbank Creek

This waterway is an excellent float heavily used from Brookville, Baxter, and Heathville, which are used as starts for short float trips. It's good brown trout water, but don't be surprised if you tie into a northern or two, or once in a while a decent bass. Redbank Creek is fished heavily as it flows through Brookville and Summerville.

Little Sandy Creek

This creek is one of our few farm area streams. The entire valley is gravel as is the stream, just recently recovering from too much mining in its watershed. It is an excellent fly stream, but baitfishermen, particularly those adept at rigging minnows, have a field day here, too.

Big Run

Big Run is small, offers good access, and is brush-lined. This trib of Little Sandy also has been severely degraded by mining, and it is still plagued with mud and some acid. In spite of those setbacks, it provides a fine small stream experience just north of Punxsutawney.

East Branch of Mahoning Creek

This stream begins on the western slopes of the continental divide, like all waters in Jefferson County. This stream is stocked from Clearfield County to its mouth outside of the town of Big Run. At one time it was a premier stream for this area. Today, it still manages to provide some good trout fishing, but mining has sadly affected its ability to do so.

Pekin Run

Pekin Run is one of the few streams in the area that supports not only a native brook trout population, but also maintains a reproducing brown trout population. It also is stocked, and provides an excellent small stream experience. It bisects Route 968 north of Brookville.

Wolf Run

This stream has excellent access off Route 219 south of Brockway. This stream is small with excellent stone fly

hatches, and also is stocked, with a good population of fish holding through June.

Rattlesnake Creek, Rattlesnake Run, Big Run (trib of Mahoning Creek), Walburn Run, Callen Run

All these waterways are small streams, all are stocked, and all contain some natural reproduction. They offer varied good trout fishing, and maintain good cold water flows throughout the year with good to excellent insect hatches.

Cathers Run, Clear Creek

Both streams are moderate in size, both feed the Clarion River, both have about the same water quality, and both are basically brook trout waters. Cathers flows through game lands, while Clear Creek flows through the state park bearing its name. These streams are cold and pristine, surrounded by beautiful mountains with excellent scenery and wildlife. They are located in northwest Jefferson County.

Clarion River

The Clarion River is not just a trout river, but probably one of the finest big-water experiences a fisherman has available east of the Rockies. It's big, it's flat, and it's filled with many tumbling chutes, long riffles, and a host of long, deep pools. It flows some 20 miles through Jefferson County.

The Fish Commission stocks the river, but only with fingerling trout. Those fish caught there all grew up there or migrated in. Trophy fishing is beginning to show results, and now fishermen are beginning to refer to many of their catches by pound weight rather than inches.

Canoe trips on the Clarion are common, and its wild scenery coupled with moderate canoe waters attracts thousands. The better fishing is in the Elk/Jefferson county area around Belltown, through Clear Creek State Park just past Clarington. Good fishing is also present through Cooks Forest State Park, but you must fish early and late to get away from the armada of canoes that assaults the river through midday.

Kyle Dam

This waterway was recently reclaimed and renovated by the Fish Commission. Its 129 acres of warmwater fishery shall in the future carry the connotation of a trophy area, designated by the Commission as a conservation area. The special sizes and creel limits imposed coupled with the habitat improvement and management should provide excellent warmwater fishing by 1988.

Mahoning Creek

Downstream from Punxsutawney, Mahoning Creek provides a real smorgasbord of fishing. Northerns, walleye, smallmouth, crappies, and even a few trout show up in creels. It's also an excellent place for the bowman who likes to go after carp and suckers.

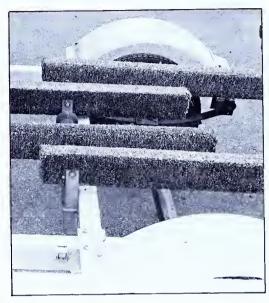
PA

Porter Duvall is the Jefferson County waterways conservation officer.

Modify Your Trailer into a Drive-On



A typical small boat trailer — lots of loading headaches.



Lowering keel rollers and installing a second set of bunks set closer together will make boat loading much easier.



Engineering of side rails is critical and must be individually designed for your trailer. Here Bob Hornstrom measures a 14' fiberglass boat for correct side rail height.

by Darl Black photos by the author

veryone who has waited impatiently in line at a ramp while someone struggles to get the boat on the trailer, raise your hand and keep it up. Now, everyone who has held up ramp traffic while fighting to get the boat on the trailer properly, raise your hand. Mmm, seems like everyone has a hand in the air.

There is nothing more frustrating than waiting for a boat to be loaded on a troublesome trailer, except when you're the one attempting the loading. Even though boat design has undergone drastic changes in recent years, the instrument that carries the craft to and from the waterway has remained basically the same.

l vividly recall fishing trips as a voungster with my father and uncle when loading the 15-foot MFG runabout was a major chore. Hip boots were donned by one of the party so he could wade into the water to push and pull on the stern of the boat. A second person, usually yours truly, had to pull on the bow rope while perched precariously on the tongue of the trailer. The third person remained at the wheel of the car to back or pull forward a little bit to position the trailer. It's no wonder at that age I enjoyed stream and pond fishing more than a trip to a "big water."

According to a survey of *Pennsylvania Angler* readers, the most popular fishing crafts in the state today are 12-foot to 14-foot aluminum boats. Although we have seen the introduction of factory-ready drive-on trailers for big bass boats, the average angler with a small boat and

limited funds has had to make do with the same old trailer design.

In the last 12 years, I have owned and trailered every type of fishing craft, including john boats, V-hulls and tri-hulls. With two or four trips to the water each week, I quickly decided I was not about to waste time at the ramp. I observed the problems of small boat trailers with angling friends and examined various attempts by others to make loading easier.

Standard trailer problems

The standard low-budget trailer is built with two rear cradle bunks, two or three center keel rollers attached to the cross members of the frame, and usually one keel roller on the tongue.

I don't have to tell you the problems that typically occur when trying to load your boat. It is difficult to align the keel on the rollers. Even when you have the bow started properly, the rollers lift the front section of the boat, and without additional support from the bunks, which are not touching the hull at this point, the next thing you know the keel has slipped off the rollers. This is when the hull may be gouged by the sharp edges of the roller brackets. And add a breeze! Need I say more about keeping the boat aligned when loading?

When you have had enough aggravation and decide to do something about it, you can create a drive-on model from any trailer with several simple modifications. The steps are: (1) lowering the center keel rollers, (2) adding two additional cradle bunks, and (3) adding a set of side rails.

Total cost of parts, excluding labor for welding, should be under \$50. Now that is a remarkable savings when you consider that a drive-on trailer carries a minimum price tag of about \$1,000.

Basic requirements

Before detailing the modifications, it is important to cover some basic trailer requirements. An inexpensive model should not be translated into a "cheap" one. Drive-on modifications do not make up for an inadequate trailer.

First, be sure that the trailer you select is rated to haul the total weight of your rig. This vehicle weight figure includes the combined weight of the



Layout of side rail assembly before welding and bolting together.



Worth Hammond welds braces to side rail supports.

hull, outboard motor, gas tank with fuel, batteries, and other equipment. Gross axle weight also includes the weight of the trailer itself. Second, the trailer must be long enough to support the critical transom area of the boat with cradle bunks. If you think you are saving money by buying a less than adequate trailer, you will pay for it down the road when a spring or axle breaks, the frame cracks from stress, or the hull is

damaged from lack of support.

Once you have chosen a trailer with sufficient weight capacity and length support for your rig, you can begin the modifications to make a drive-on.

Loosen the center keel rollers and drop them several inches so that the hull is resting solely on the rear bunks. Retighten the roller brackets.

If the rollers are already set as low as possible, you will need to raise the





The side rail guides should fit the hull close enough to keep the boat straight, but not so tight that they rub the boat. Bob Hornstrom and Worth Hammond check out the fit.



Do not weld directly to the trailer frame unless you can be sure it will not weaken the structural integrity of the trailer. Trailers are subject to a lot of vibration. In this case the side rail supports are welded to a fender bracket which is bolted to the trailer frame.



Two examples of customized drive-on trailers with extra set of bunks and side rail guides. The one on the left is for the author's 14' tri-hull; the one on the right for a 14' aluminum V-hull.

cradle bunks several inches. This adjustment is best accomplished with the boat off the trailer, so run it down to the local ramp.

If you are not near a launch ramp where you can drop the boat into the water, the cradle supports can be raised by using two screw or hydraulic jacks under the loosened brackets to push up the bunks while the boat is still on the trailer.

Once the first step is completed, the keel rollers should only serve to keep the deep bow of a V-hull or tri-hull from hitting the frame as you drive it on the trailer. If they are too high when you drive on, the bow will rise, wobble, and likely slip off the roller entirely.

Install a second set of cradle bunks about halfway up the trailer starting where the rear bunks stop. The bunks should be at least 4 feet, or longer if necessary to bridge the forward cross members of the frame. These bunks should be set closer together than the rear bunks. The chief purpose is to catch the bow and lock it in on track as you drive on. These new bunks also provide critical support because the keel rollers have been lowered.

On a V-hull, the second set of cradle bunks should be only 12 to 24 inches apart. However, with a tri-hull, these bunks should be set to support the flat area of the hull between the keel and the side sponsons.

It is best to install the second set of cradle bunks while the boat is sitting on the trailer. Again, jacks are needed to push the bunks snug against the hull.

Some trailers have pre-drilled holes in the right position to install the new bunks; on others you need to drill the holes yourself.

Check to see that the V-bow does not strike the tongue of the trailer when loading or unloading. To prevent this, raise all four cradle bunks or try to position the tongue roller guide to protect the bow in this area. But keep an eye on the tongue roller guide; its bracket may still be the culprit in scratching the hull.

If the bow does not ride the tongue roller guide properly, make a short pair of carpeted mini-bunks (12 to 16 inches in length) to replace the roller.

The brackets for the bunks may be obtained where you purchased the trailer, or have the dealer order them



from the trailer manufacturer. Depending on the type of bracket, the cost may run from \$2.50 to \$5 each. When buying 2x4s for the bunks, be sure to purchase treated lumber, which prevents premature rotting when subjected to moisture. An eightfoot treated 2x4 should run about \$3. Carpet the 2x4s with a tough rubberbacked outdoor carpet.

The most complicated modification is the addition of side rails. Side rails are important in keeping the boat aligned under breezy conditions, as well as preventing the stern from swinging left or right while driving on under the power of the outboard.

The rail guides should fit the side of the hull close enough to keep the boat straight but not so tight that they are rubbing the side of the boat. The rail guides should be between 3 and 4 feet long.

You can purchase a set of adjustable side rails from a trailer company and pay three to four times the money you can make them for. But working within a budget is what this is all about, so I assume you will make them yourself or with the help of friends.

The needed box tubing and plate can usually be picked up at a scrap yard for under \$10. As with the cradle bunks, use treated 2x4s covered with quality outdoor carpet for the side bunks.

Engineering of the side rails is critical and must be individually designed for your trailer. With some trailers, the side rail supports can be welded directly to the trailer frame; on others it should be bolted on so they don't create metal fatigue. A lot depends on the size and quality of the trailer frame and the scrap metal you have available. If you have any doubts, be sure to get the advice of a reliable welder.

Draw up the design for your particular hull/trailer combination, cut the metal to the desired specifications, and clean off old paint and rust. Next, drill the necessary holes for attachment of bunks. Also drill the holes for mounting if your plan calls for bolting to the frame.

Now you are ready for the welding. If you are a welder, or can arrange the services of one through barter, you will be saving a chunk of money. Otherwise, plan at least another \$50 investment.

Be sure you have gussets or braces at critical stress points. Do not weld directly to the trailer frame unless the welder can assure you that it will not weaken the structural integrity of the trailer.

When the welding is done, it is time to get a primer coat of paint on as quickly as possible. Mask off the trailer and use a quick-drying primer. Follow up with a finish enamel. Once everything is dry, screw the carpeted bunks onto the rail supports with lag screws.

Presto! With the above modifications to your budget trailer, you now have a slick drive-on model. No more embarrassment at the ramp. Your buddy backs the trailer into the water, you drive the boat on, connect the winch, and the rig is pulled from the water. Simple as 1-2-3 and you don't get your feet wet.

Finding Your Own Faraway Place May Be Easier Than

You Think

by Bob Wilberding

ow many times have you heard anglers talk about secret fishing places where nobody goes or remote trout streams far away from everywhere? Of course, they never mention the names of these isolated places, only that they're out of the way and that they always produce fish.

I don't claim to be an expert angler, but I do fish "now and again," and my job as a fisheries technician with the Fish Commission has allowed me to participate in electrofishing at least

100 northcentral Pennsylvania trout streams. This still doesn't qualify me as an expert, and there are hundreds more streams to inventory, but I've seen a lot of trout, talked with dozens of anglers, and would like to share some of my experiences.

Small streams

During the summer of 1983 and 1984, Area Fisheries Manager Bruce Hollender, I, and an assistant electrofished 40 small, inaccessible headwater trout streams to determine their resources.

To summarize our findings briefly, only about half of these remote streams had class "A" trout populations. A few, to our surprise, had few or no trout at all.

While surveying these streams, we also noticed that judging from the campfire rings, paths along streams, and occasional hook wrappers and

bait containers, that almost all these streams appeared to get at least some angling pressure. This does not mean you should stop looking for waters off the beaten path (some of the ones we examined were excellent). My point is that maybe you should stop looking for hard to reach places and concentrate on waters closer to home.

Let me give you two examples.

One opening day about six years ago, I noticed an angler carrying a trout out of a place I never considered fishing. Sure, the small stream looked fishable, but I knew it almost dried up in summer. Besides, its location (between two lanes of an interstate

and the trout I'd caught there.

On another occasion, I drove past hundreds of anglers on a stocked stream to fish an unstocked stream near a small factory. Aesthetically, the two streams may not have been the same. But I encountered only one other angler that morning, and caught four nice trout. The two streams were only about a mile apart.

Electrofishing results

Electrofishing in a variety of trout streams has proven two things to me. First, as many observers of Fish Commission surveys have found out, there are often more trout in streams

than people think. Second, if the habitat is suitable, there are more trout in populated areas than people think.

Rich Faler in the article, "Hidden Trout," (October 1984 Angler) perhaps described the situation best when he wrote, "the hardest concept to grasp is that trout water doesn't have to look like trout water."

I particularly remember a summer 1979 survey on Young Womans Creek. As many or more legal-sized trout were found in the town of North Bend than at similar length sites on

the Left Branch Young Womans Creek on state forest land upstream. Since that survey I've seen this happen frequently.

Big brown trout

I'm continually surprised where I find large brown trout, both



highway), didn't add to its appeal.

Several opening days passed before I got to try the stream. Yes, I had the place to myself and there were trout there: two beautiful brown trout of 141/4 and 143/4 inches to be exact. Far different fishing from the crowded stocked trout stream I'd fished earlier



professionally and as an angler. Because of their stable water temperatures and abundant food supplies, I've become accustomed to finding an occasional brown of 18 inches or longer during a survey of a limestone stream. However, some of the largest trout I've seen have been on freestone streams.

It is remarkable that these large fish are able to survive to such an old age, despite their environment and angling pressure. Log jams, large pools, and under bridges are the most common locations for most large fish that we find while electrofishing. However, we found one under a culvert leading from a small tributary in to a main stream. The largest brown trout we found during our 1985 inventory season was captured while we were conducting a study for smallmouth

bass. Its location? Just outside Emporium, the most populated area in Cameron County.

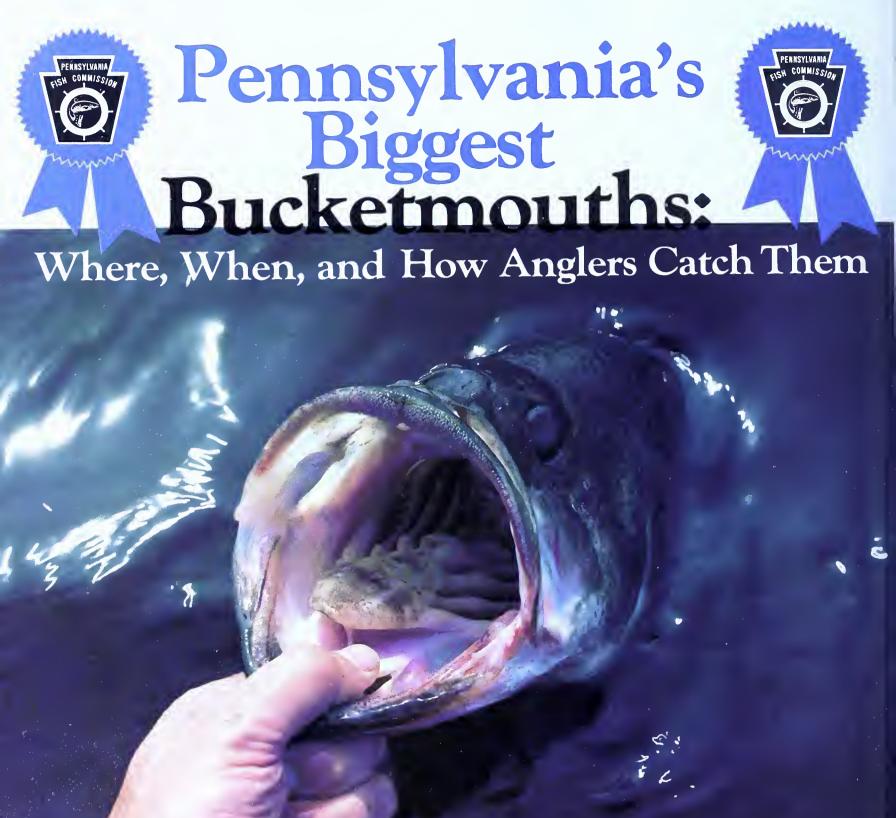
Locations

How does someone go about finding his own secret spot? Trial and error is probably the best way. Select nearby waters from a topo map or other source such as the county features articles. Pay particular attention to areas above and below approved trout waters and any tributaries that enter these waters. One of the best times to look for a hotspot is in the summer or fall when the water is low. If trout are present in the stream at that time, it's almost assured that fish will be there in the spring. In northcentral Pennsylvania, streams that are bank full in April may be dry in July or August.

For those of you still unconvinced and still wishing to hike into a remote stream, let me offer one more word of advice. If the stream you desire to fish has a well-marked trail alongside, other anglers are probably already visiting it. So enjoy the scenery and don't be disappointed if you don't have the place to yourself. And if you see someone fishing along a road or somewhere you've never considered fishing before, don't neglect the possibility that he may know something you don't.

Remember that if the habitat is suitable, trout usually live there, no matter where the location is.

Bob Wilberding is a Commission fisheries technician assigned to Area 3 (Northcentral Region). He's surveyed hundreds of miles of trout streams.



by Art Michaels

n 1985, some 219 Senior and Junior Angler's Awards were offered for largemouth bass catches. The application details are a gold mine of information on where these big bass were caught, when anglers made their catches, and with what offerings the fish were fooled.

If you want to catch the Commonwealth's biggest largemouth bass, let this information point the way to your success.

When to fish

Largemouth bass eligible to earn an angler an award must be 5 pounds for a Senior Angler's Award and 4 pounds for a Junior Angler's Award. Largemouths were

caught in all 12 months of 1985. Catches in January, February, and December were through the ice.

Here is the number of fish caught in each month of 1985:

January, 2.
February, 2.
March, 10.
April, 10.
May, 7.
June, 38.
July, 40.
August, 35.
September, 31.
October, 18.
November, 7.
December, 19.



Baits and lures

Live baits accounted for 68 bass; lures accounted for 138 fish. Awards were made to 13 anglers whose offerings were unknown.

For live baits, shiners took the most fish — 33. Worms caught 19, minnows accounted for 9 bass, and crayfish took 4. A grasshopper, a sucker, and a bluegill each fooled one bass.

For lures, the offering that accounted for the most fish was a spinner — 39. The spinner accounted for the most number of largemouth bass for all kinds of baits and lures, fooling about 18 percent of all award-winning largemouths.

Some kind of diving crankbait accounted for 35 bass, and 29 were fooled with a plastic worm. Jigs, including traditional jigs and spinnerbaits, took 9 fish, and surface lures, including buzzbaits, accounted for 21 bass.

In the category of surface lures, 12 of the 21 bass were caught specifically on a Jitterbug.

Spoons took 3 bass, and fly rod poppers took 2.

Unfortunately, no information is available on the color or size of specific lures.

Where to fish

Anglers caught eligible largemouth bass in some 80 waterways in 43 Pennsylvania counties. Here listed by county are the specific waterways where bass were caught and how many largemouths were taken at each spot.

Adams County, farm pond, 1.

Adams County, state game lands, 1.

Armstrong County, Keystone Lake, 1.

Beaver County, Hereford Manor Lakes, 2.

Beaver County, Sterling Lake, 1.

Bedford County, Shawnee Lake, 1.

Berks County, Hopewell Lake, 3.

Berks County, Ontelaunee Creek, 3.

Berks County, Schuylkill River, 1.

Bradford County, farm pond, 1.

Bucks County, Delaware River, 2

Bucks County, Lake Galena, 1.

Bucks County, Nockamixon Lake; 5.

Bucks County, Churchville Reservoir, 1.

Butler County, Lake Arthur, 75.

Cambria County, Ebensburg Reservoir, 1.

Cambria County, Glendale Lake, 12.

Carbon County, Mauch Chunk Lake, 5.

Carbon County, Tippetts Swamp, 2.

Centre County, Black Moshannon, 2.

Chester County, Marsh Creek Dam, 2.

Clearfield County, Curwensville Dam, 1. Crawford County, Hartstown Marsh, 2.

Crawford County, Pymatuning Lake, 1.

Crawford County, Tamarack Lake, 7.

Cumberland County, Opossum Lake, 2.

Cumberland County, game lands pond, 1.

Dauphin County, Lytels Pond, 2.

Elk County, Ridgway Reservoir, 1.

Erie County, Albion Reservoir, 1.

Erie County, Edinboro Lake, 2.

Erie County, Lake Erie, 2.

Fayette County, Virgin Run Dam, 1.

Forest County, Buzzard Swamp, 1.

Franklin County, Shirleys Lake, 1.

Huntingdon County, Raystown Lake, 1.

Indiana County, Yellow Creek Lake, 1.

Lancaster County, Octoraro Creek, 2.

Lebanon County, Memorial Lake, 4.

Lehigh County, farm pond, 1.

Lehigh County, Jordan Creek, 1.

Luzerne County, Francis Slocum Lake, 1.

Luzerne County, Lake Jean, 1.

Luzerne County, Lily Lake, 2.

Luzerne County, Moon Lake, 1.

Luzerne County, Mountain Lake, 1.

Luzerne County, Sylvan Lake, 1.

Lycoming County, Beaver Lake, 1.

Lycoming County, Rose Valley Lake, 1.

Mercer County, Lake Wilhelm, 2.

Monroe County, Gouldsboro Lake, 1.

Monroe County, Hidden Lake, 1.

Northampton County, Delaware River, 1.

Northampton County, Minsi Lake, 4.

Northumberland County, Susquehanna River, 2.

Pike County, Pecks Pond, 3.

Pike County, Promised Land Lake, 3.

Pike County, Shohola Lake, 1.

Pike County, White Deer Lake, 1.

Schuylkill County, Locust Lake, 2.

Schuylkill County, Sweet Arrow Lake, 1.

Snyder County, Hassingers Pond, 1.

Snyder County, Middle Creek Lake, 1. Snyder County, Walker Lake, 5.

Somerset County, Cranberry Lake, 1.

Somerset County, Lake Somerset, 1.

Sullivan County, Hunters Lake, 1.

Sullivan County, farm pond, 1.

Sullivan County, Lake Jean, 1.

Union County, game lands pond, 1.

Union County, Walker Lake, 1.

Warren County, Spring Creek, 1.

Warren County, Sugar Grove Swamp, 1.

Washington County, Ten Mile Creek, 1.

Westmoreland County, Lake Donegal, 1.

York County, farm pond, 1.

York County, Conewago Creek, 3.

York County, game lands pond, 3.

York County, Lake Marburg, 1.

York County, Lake Redman, 2.

York County, Pinchot Lake, 1.

York County, Susquehanna River, 1.

PA

Angler's Award Pamphlet

For the complete details on the Commission's Angler's Awards program, the Commission has available an updated and revised pamphlet. The publication includes a list of current Pennsylvania state record fish, minimum weights for eligible species, and applications for Senior and Junior Angler's Awards, 50+ Husky Musky Club, and state record fish. Please include a business-sized self-addressed, stamped envelope with requests. Contact: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

ANGLERS CURRENTS

MAIL

I was flipping through your December issue recently and of course dwelled for some time on your "Mail" column because the contributors are usually my kind of people. While browsing about the rest of the issue, my mind kept coming back to one of the letters in the "Mail" section; the one from the "transplanted Pennsylvanian" who missed the "good ole Keystone State fishing."

His recollections were pages out of my past; but how could he have compared the fishing in Pennsylvania to what he experienced in the Ozarks and around the Santa Barbara offshore oil platforms, where you first fish for bait, and then you use the bait to fish for larger fish?

I went back to the letter and read it again, and then I understood. I experienced the same things the author did. In Pennsylvania you work for your fish and have to outsmart them. Each one on the stringer is earned. It is not just a matter of dropping the line over the boat.

It has been over 10 years since I really fished Keystone State waters; mostly because my fishing buddy moved away. I guess one day we'll get together again and "lay back in a rowboat and drift across Presque Isle Bay fishing for whatever's biting that day."

You see, when I got to the end of the letter, I saw that it was written by my son, my fishing buddy. The sequel to the story is that Bill didn't know his letter had been published. He dashed it down just after he had read an issue of your magazine a while back. In a moment of intense, fond memories mixed with a heaping tablespoon of homesickness, he expressed his feelings on paper. Fortunately, it got into an envelope and found its way to you.

I would like to pass on a personal message to my son who I am very proud of as a career field officer at Vandenberg Air Force Base in California. Take my grandson Brandon fishing often so that he learns to enjoy the sport as you do; then one day we'll move to the bow

and the stern of that rowboat and give him a chance in the middle seat to catch one of those big Presque Isle Bay lunkers.—Bill Kalaskie, Sr..

McMurray, PA

For over 50 years, the best hotel and restaurant chefs (and a few fishermen) have known the secret for sweetening fish. There is a very simple method for removing the oily, fishy taste often found in trout, salmon, shad, pike, pickerel, catfish, and bass.

Into one gallon of cold water, dissolve 3 tablespoons of table salt and 2 teaspoons of baking soda. Submerge and weigh down the fish with a plate, and then refrigerate and soak overnight. Actually, 5 or 6 hours will do.

Then drain off the oil layer floating on top, discard the used brine solution, and rinse the fish in cold water. Dry the fish and cook the way you like. You can freeze portions for later.—Bill Feddock, Forest City, PA

Since shortly before the opening of the Pennsylvania trout season, I have had the occasion to work on a project in Wyoming County. As a result, I have found myself a beneficiary of your very fine program.

As a lifelong resident of Colorado and Oregon, I have seen firsthand the trout fishing programs developed by "out-of-doors" states. I would like you to know that in my eyes your program compares more than favorably.

Your \$20 nonresident license fee is reasonable. The fish you stock are the nicest by several inches of any stocked trout I have seen. WCO Steve Shabbick is patient and helpful with the questions and needs of an interested tourist.

Many thanks for making what I expected to be a very quiet month into the working vacation of my life! I certainly look forward to telling my friends of the fishing opportunities in Pennsylvania.—Willis H. Wamsley, Jr., Herndon, VA

I'd like to take the time to say thank you for making your publications available to the anglers and boaters of

Pennsylvania. I am 13 years old, and since I was about 8 I have kept a great interest in fishing. I feel that the publications available will truly help me become a better angler. I go fishing whenever I can in the summertime, and I enjoy the great fishing in my town. I usually go to the Lehigh Canal where there is great fishing for panfish, trout, bass, pickerel, and catfish. It's a nice place to fish with beautiful scenery. In the summertime, I love it when a father takes his child fishing and the child catches his first fish. He treats it like a trophy, at least that's how I acted when I caught my first fish. But what I enjoy the most is when the trout season opens and people line the canal hoping for a good trout. I have to say luck was on my side because I caught two brown trout. One was the biggest fish I have caught so far—a 16-inch beauty. My dad was proud of me, and I was proud of myself.—James Gower, Lehighton, PA

The fishing in northwestern Pennsylvania has risen to new high standards. The Oil Creek Valley is an easily accessible trout stream for many of the younger fishermen, and will also supply them with an opportunity to catch a number of different species of trout.

I found a beautiful stretch of water beginning at Drake Well Park through to Petroleum Center, near Oil City. It is easy to reach because of a bicycle trail that runs along the creek; it was developed mainly for use by bicyclists and is a very nice ride.

It is paved and there are several access roads crossing it and several places to park.

This stretch is also great fishing for the trophy-getters. Each year, when the Commission stocks, it puts in some brood trout. Every year, some survive the onslaught of fishermen, and they get to be even better size. I have caught some from 21 inches and up, and local fishermen have caught ones from 28 inches to 30 inches long.

I think that many fishermen would greatly enjoy the experience of fishing in Oil Creek, as I do.—Heath Boddorf, Titusville, PA

PA. FISH COMMISSION BOATING EDUCATION

IS THE PLUG IN?

BOAT SAFELY

by Virgil Chambers

n the rush to launch a boat, many boaters forget to place the boat plug into the drain hole. The problem, although usually not tragic, can certainly be embarrassing.

Simply, what occurs is that water starts to fill the boat. With johnboats and utility craft, taking on water is quickly recognized and the boat can be retrailered, drained, and plugged. Depending on the amount of water taken in, the plug can be inserted and the water bailed without retrailering the craft.

However, usually not so fortunate is the boat with a deck over the bilge. The absence of the plug again causes water to enter the craft, but this time, detection of that water may not be as quick. The embarrassment of merely forgetting the plug can soon become something more serious.

The boater, when out on the lake or river, shortly realizes that something is wrong and whether it's the drag in power or the presence of water reaching a noticeable level, the extra weight and loose water affects the boat's stability.

Although some boats will still float to some extent when full of water, the expense and inconvenience in recovering a flooded boat is great. So if you perceive that you are taking on water, don't panic, but don your PFD and head for shore. The chances of returning safely are in your favor. In fact, if you can attain sufficient forward speed, the boat may actually self-bail, leaving you only to insert the plug.

Launching a boat need not be a complicated procedure, but forget the drain plug and it could very well turn into one. Remember that before you launch, check and double check the drain plug.

Boaters sometimes forget to place the drain plug or boat plug in a boat before launching. To remind boaters of this simple yet important task, the Pennsylvania Fish Commission's Boating Safety Education Section is distributing a weatherproof sticker that can be placed near your boat's bow eye (or any other location where you would notice it before placing the boat in the water). For a free sticker, send requests to: Boating, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. Include a stamped, selfaddressed business-sized envelope with requests.

Virgil Chambers is chief of the Commission Bureau of Waterways Boating Safety Education Section.



√Trailering Checklist

Like a pilot of an aircraft, the skipper of an outboard boat should go through a checklist before trailering his boat on the highway.

Here is one such list, supplied by the makers of Mercury outboard motors:

✓ Is the trailer hitch securely fastened to your tow vehicle?

✓ Is the coupler firmly locked on the hitch ball? Try to lift the trailer tongue to make sure (use your legs, not your back, when you lift).

✓ Are the safety chains crisscrossed under the trailer tongue and securely fastened to both hitch and trailer tongue?

✓ Have someone stand behind the rig while you work the brake pedal and turn signal to verify that all the lights are functioning.

✓ Is the trailer winch locked?

✓ The boat's bow should be held firmly against the bow stop by means of the winch line. Is the hull resting firmly on the supports? If not, adjust them so that boat weight is evenly distributed.

✓ Is the secondary winch line secure? (Never rely solely on the winch cable.)

✓ Examine the wheels. Are the lug nuts tight? Are the tires properly inflated?

✓ If your trailer has its own brakes, are they working?

✓ If you are carrying any gear in the boat, is it lashed down securely?
✓ Is your outboard motor in the vertical position? If you have to tilt it out for road clearance, does the outboard have sufficient supplementary support? In the case of a small outboard, this support might take the form of a block of wood between the clamp and swivel brackets; a big outboard can be supported by means of a rod between the boat's lower unit and the boat trailer

✓ Are all tie-downs properly placed and tight?

Pennsylvania Student Wins Poster Contest

Bradley Allen Heeter of Knox has won Third Place in the Junior Division of the 1986 National Hunting and Fishing (NHF) Day Poster Contest. Bradley, an eighthgrade student at Keystone Jr.-Sr. High School, will receive a \$100 U.S. Savings Bond. His entry in the NHF

Day Poster Contest was sponsored by the Pennsylvania Federation of Sportsmen's Clubs.

His poster was among thousands entered by students in local NHF Day Poster Contests sponsored by schools, youth groups, sportsmen's clubs, and conservation organizations across the country. Entries were judged on how well the students illustrated the contest theme, "Sportsmen and Conservation — Working Together

for Wildlife," and on their artistic merit and originality.

Information on how to sponsor or enter the 1987 National Hunting and Fishing Day Poster Contest is available free from NHF Day Headquarters, P.O. Box 1075, Riverside, CT 06878.

Anglers IN Dave Wonderlich

If you ae still going fishless after trying several different lures, flies, or bait, change your presentation. Try drifting your offering from the opposite bank, fish downstream instead of up, work the offering slower or faster, deeper or shallower. Make a change, enough of a difference may make the fish hit.

If you are angling for a trophy and wish to keep only heavyweight fish, ensure the survival of the smaller fish that will be released by handling and weighing them with care. Land the fish with a net, unhook the specimen, and then while holding the net handle grasp the bag with the hook on the portable scale and pick up the fish and net bag. If the fish is not the lunker you want, it can be lowered and released from the net without ever being touched.

Even in the summer hypothermia can strike. If you wade wet, or have gotten wet while fishing, the drying process lowers your body temperature. This may feel good in the middle of the afternoon, but in the evening after the sun is down and temperatures begin to drop, it can be deadly. If you get wet, dry quickly and get back into warm, dry clothing.

Monofilament line deteriorates quickly when exposed to the elements; replace old line with new line often.

August is noted for low water and tough fishing; it can also produce some of the hottest action after a rain when the water is on the rise. Try your favorite bait; you can get away with larger lures and flies.

After an August rain, try the lower ends of tributaries of larger trout streams. Small tributaries that held few fish can experience a dramatic rise in trout populations after the waters rise.

For good fishing action on hot August days try limestone streams. Their colder water allows the fish to feed actively throughout the day.

Save the ashes from a cigar or cigarette in a 35mm film container. Rubbing some ash on the blade of your lure between your fingers will have the metal shining again.

Try fishing your favorite surface bass lures at night in trout water. Many large trout are caught by bass fishermen as the fish prowl for dinner after dark.



Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities.

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The Law and You

by Bill Hartle

O. I enjoy fall fishing for trout. Where can I legally harvest trout at this time of year?

A. The extended trout season in Pennsylvania runs from the day after Labor Day to midnight on the last day of February the following year. The areas where trout can legally be harvested include all approved trout streams plus lakes and ponds, and all specially regulated areas.

O. Is it legal to take bait from specially regulated areas? A. No. The taking of baitfish or fishbait is prohibited at all times from these areas.

O. Are frogs legal for bait? A. Yes. Unless purchased, bullfrogs and green frogs have a season from July 1 to October 31 with a daily limit of 15. All others, unless on the threatened and endangered species list, have an open season with a daily limit and possession limit of 2 per each species.

Q. While fishing for bass the other day, I noticed a man using an 8-inch rainbow trout, drift fishing for muskies. Is this legal?

A. Yes. Any fish taken by legal means and of legal size may be used for bait. Also, if it's purchased from a live bait dealer, it's also legal.

O. Does Pennsylvania have any regulations on reptiles?

A. Yes. Although there is no closed season, there is a daily limit and possession limit of two for each species.

O. Are set lines and traps legal for taking turtles?

A. Yes. Hooks used on set lines shall not be less than $3\frac{1}{2}$ inches long with not less than a one inch space between the point and the shank. If left

unattended on waters that are open to public fishing, the device must be marked with a tag or other means of identification with the name, address, and telephone number of the owner or user of the device.

Q. Is it legal to sell snapping turtles? A. Yes. No other reptile or amphibian, whether dead or alive, in whole or in parts, that was taken, caught, or killed in the Commonwealth, may be sold or offered for sale.

Bill Hartle is assistant supervisor of the Commission Northcentral Law Enforcement Region.

Two New State Records: American Shad, Crappie

On April 29, 1986, Anthony Mecca, of Peckville, PA, was casting a shad dart into the Pike County waters of the Delaware River. A 9-pound, 9-ounce shad took the dart, and Mecca fought and landed a new state record American shad.

The new state record bests the old mark by only 2 ounces. That shad was fooled in 1984 by Anthony Fortebuono, of Easton, PA. The new state record American

shad was 251/4 inches long with a girth of 171/2 inches.

The day after Mecca made his state record catch, Ernest Podleyon, of West Middlesex, PA, caught a new state record crappie in Shenango Reservoir, in Mercer County. Podleyon's crappie weighed 3 pounds, 12 ounces, and measured 17 inches in length. He caught the fish on a jig with a plastic action tail. The old state record crappie was a 3-pound, 6-ounce fish that John J. Phillips, of Croydon, PA, caught in the Bucks County portion of the Delaware River. This record has stood since 1983.

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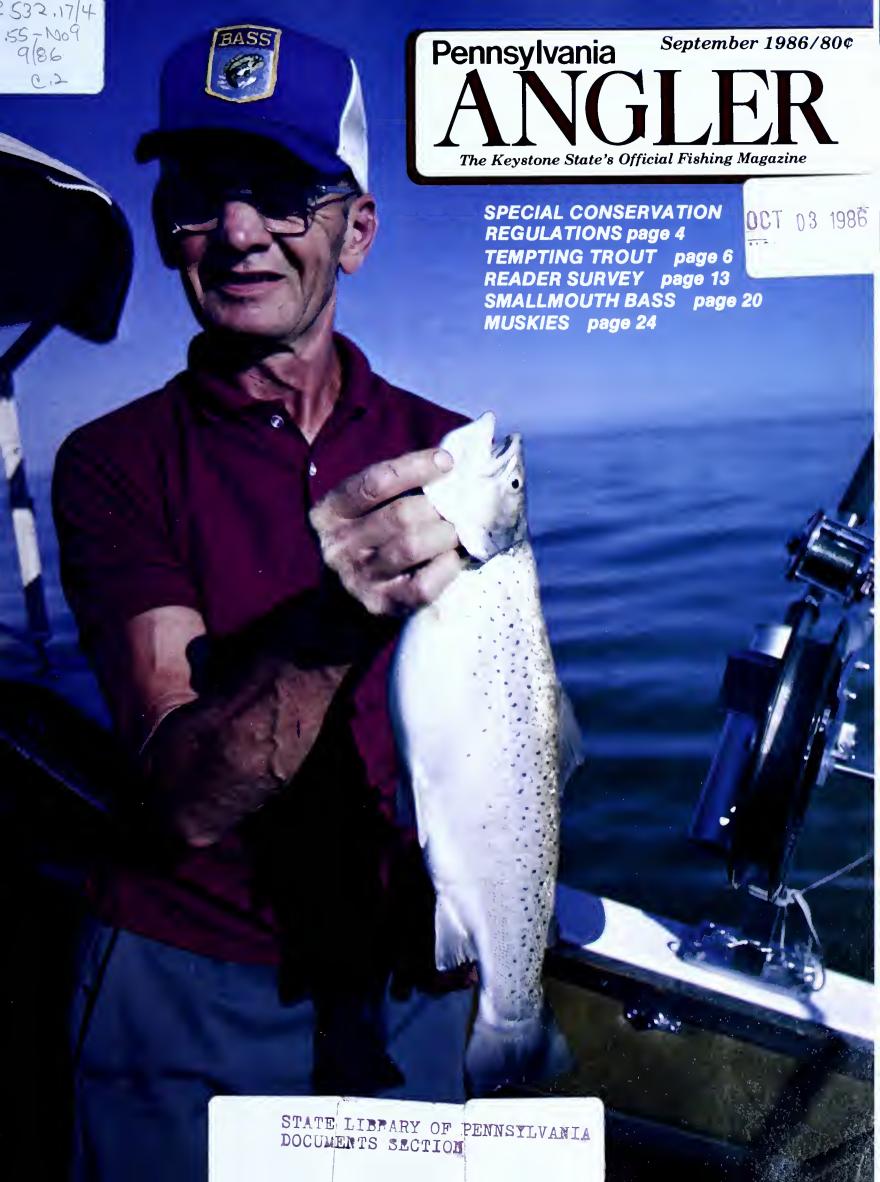
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Straight Talk

WETLANDS PROTECTION

Wetlands, in addition to providing breeding grounds for fish, waterfowl, and other forms of wildlife, also play an important role in controlling floods and replenishing underground water supplies. As such, wetlands represent a critical component of the nation's ecosystem. U.S. Environmental Protection Agency officials say that development nationwide is causing the loss of between 300,000 and 500,000 acres of wetlands per year.

Wetlands are basically protected under Section 404 of the Clean Water Act, and without the protection of this law, swamps and other valuable wetlands could be drained and filled;



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

vital wildlife habitat could be turned into housing projects, shopping centers, and the like. The administration of Section 404 has for over 10 years been under the jurisdiction of the Army Corps of Engineers, and in many cases the administration of this important act has been less than desirable. The Corps has tried through regulatory changes to issue nationwide permits, statewide permits, and other means to justify limiting the jurisdiction of the Clean Water Act to some boundary less than the full breadth of the wetlands found in the term "all waters of the United States."

Former Assistant Secretary of the Army for Civil Works William R. Gianelli probably did more damage to wetlands protection in its application than any of the most selfish developers could dream of, and his successor Robert Dawson is perhaps worse. Proposed regulatory changes by the Corps far exceeded the status of "minor changes" in the jurisdictional scope of the pre-1982 nationwide permits, and the National Wildlife Federation and 15 other conservation groups challenged the legality of a number of 1982 regulatory changes. There has been a constant controversy surrounding Mr. Dawson and the Corps' Section 404 program. For example, the Corps dared to say that placing 60 percent of the wetlands in the Poconos under a nationwide permit program is a significant benefit, ignoring the facts and dismissing the opinions of 38 states and the EPA as being "misinformed" in the Corps' extreme zeal to jettison the 404 program.

Much lip service has been given to wetland protection by some members of the Congress—so long as it is not in their district and desirable for development by a favored constituent under the guise of economic progress.

At any rate, Pennsylvania has taken a pretty firm position in protection

and some of the Corps districts notably, the Buffalo District—have been better than average in carrying out the mandates of the law.

The classic case, however, of a proposed development took place in Massachusetts when the Pyramid Corporation proposed to fill Sweeden Swamp, a valuable red maple wetlands, to make room for a shopping mall in Attleboro. The New England branch of the Army Corps of Engineers initially rejected the project, but in a rare, though not unheard-of event, the Washington headquarters overruled the regional office and gave the project a green light.

The story did not end there, as the Environmental Protection Agency rejected the development plan "because EPA scientists felt the site was an excellent wildlife habitat which has also been reaffirmed independently by the U.S. Fish & Wildlife Service, and Pyramid produced no scientific evidence to the contrary.

There was courage exhibited all through the events surrounding this controversial project, and we are pleased to express our gratitude to Lee Thomas, administrator of the Environmental Protection Agency. Mr. Thomas sustained the EPA regional office's veto, and for this he deserves the nation's respect and gratitude for his wisdom. His action did far more than save one specific wetlands from unnecessary destruction.

We hope that his action sent a message across the nation, and specifically to the U.S. Army Corps of Engineers, that our wetlands are irreplaceable resources, essential to America's wildlife. Perhaps his action will stand as a landmark decision to save the nation's remaining 95 million acres of wetlands battered by land conversion plans, and yet vital to flood control, water purification, and wildlife protection.

Talph W. Phele

Pennsylvania Fish Commission

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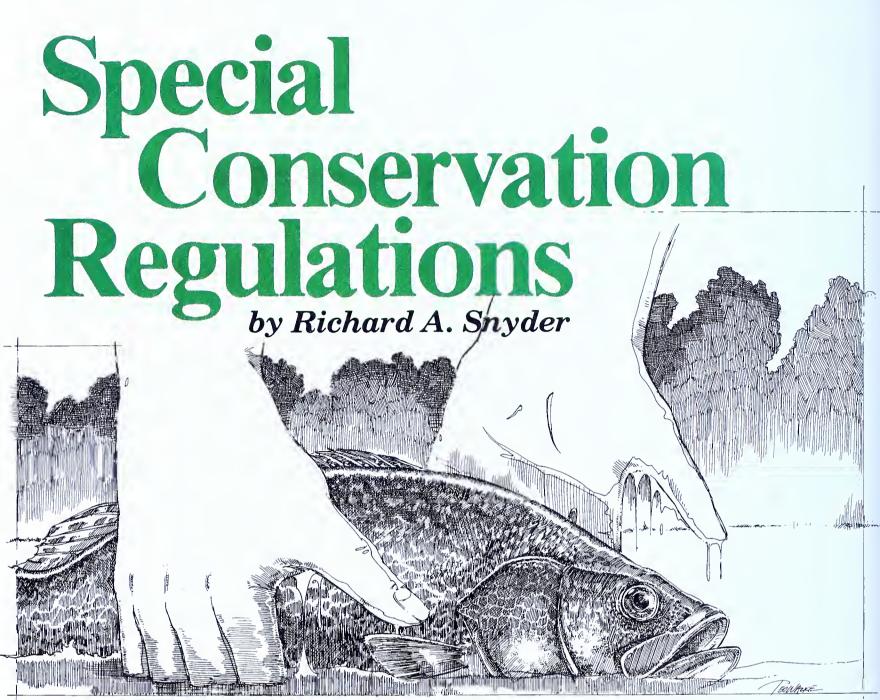
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The Brown Trout: Immigrant from the Old World by Larry Shaffer The brown trout was introduced into our waters 100 years ago. Consider this historical view
Straight Talk

The covers

This issue's front cover, photographed by Darl Black, shows the diversity of Pennsylvania anglers—Junie Poux, B.A.S.S. member, hefts a brown trout he caught by downrigging in Lake Erie. This month's *Angler* content also reflects that fishing variety. Stream trout tactics are the focus in the article beginning on page 6, followed on page 10 by a float trip feature for central Pennsylvania residents. Wherever you live in Pennsylvania, if you're a smallmouth bass enthusiast, you'll want to read the article that begins on page 20.

This month's back cover, photographed by staffer Russ Gettig, heralds fall, the Keystone State's season of change, on Little Buffalo Creek in Perry County.

With sorrow we affectionately dedicate this issue to staff assistant Jayne Povleski, who passed away suddenly in August. Jayne's strengths—her family ties, friendships, and love of life—set an example for all who knew her, and she will be missed by all the Harrisburg headquarters staff and throughout the Commission. She was 28.



Editor's note: The regulations described in this article will go into effect in January 1987.

new set of regulations for managing lake fisheries in Pennsylvania is now available for the Commission's area fisheries managers. Called "Warmwater/Coolwater Species Special Conservation Regulations," the new package is the first developed for warmwater/coolwater lakes under the Commission's Operation FUTURE.

Fish populations in numerous lakes, ponds, and reservoirs have been studied by Commission fisheries biologists and technicians as part of an ongoing inventory of fisheries in Pennsylvania. Numerous waters have been identified in which fish populations are out of balance. Typically, these unbalanced fish populations have too few large bass, walleye, and other predatory fish and too many small bluegills, crappies, and yellow perch.

Where heavy fishing pressure and the angler harvest of larger gamefish and panfish are a major cause of the unbalanced condition of the fishery, more conservative regulations are an appropriate approach to restore balance to the fish community. More restrictive regulations could be applied either to: 1) bring about an improvement in the abundance and overall size of desired sport fishes in the lake; 2) maintain the nice size and abundance of sport fishes in a lake beginning to show signs of being overfished, or 3) a combination of both.

In many cases, the regulations in effect statewide (shown in the regulation summary booklet as Commonwealth Inland Regulations) did not offer the degree of protection necessary to maintain the desired size and abundance of sport fish simply due to heavy fishing pressure. Commission staff realized that developing a different set of

regulations for each water, although appropriate on a biological basis, wasn't practical, because literally hundreds of different sets would then clutter the summary book. Anglers could become confused and, perhaps unintentionally, violate the law.

Thus, the approach taken was to develop a set of regulations that would be applied to a group of lakes which would benefit from more conservative management. The conservation regulations offer the fishery manager the means to work toward the biological objectives of a balanced fish community in waters where angler pressure currently is impacting the size and abundance of sport fish or would do so in the near future. We agreed that while the proposed regulations might not be 100 percent agreeable with each lake in the program, the new regulations certainly offer more protection than the regulation in effect statewide.

We caution readers from drawing the conclusion that regulations are the answer to all problems related to "poor fishing" in a lake or reservoir. Variables other than angler harvest, such as poor water quality, low productivity, drastic changes in water level, and lack of suitable physical habitat, often determine the quality or quantity of fish in a lake. However, where sufficient angling pressure does occur, numerous studies have shown that angling can greatly contribute to unbalanced fish populations often with the result being a few large predators and overabundant, stunted panfish.

The new regulations call for increased minimum size limits and reduced creel limits for some gamefish and reduced creel limits for some panfish. The strategy employed is to increase the abundance of gamefish under the more restrictive regulations and through this protection allow them to prey on the overabundant panfish, thus restructuring the fish community. The intended result is to provide larger panfish and a higher catch rate of gamefish.

For lakes with existing fish populations, we expect the following to occur under the new regulations:

- A decrease in the abundance of panfish but an increase in growth rates. The populations will then be comprised of fewer but larger individuals.
- An overall increase in the abundance of predators, primarily largemouth bass and walleye, under the new size limit but with a decrease in the growth rates.
- A substantial increase in the angler catch rate of protected gamefish. However, most of the gamefish will have to be released as sublegal due to the increase in the minimum size limits.
- A decrease in the panfish catch rate, reflecting their proportional decrease in numbers, but a substantial increase in the size of fish harvested.

The idea behind increased minimum size limits for some gamefish also includes more than the use of gamefish as predators to control panfish. For instance, bass 12 to 15 inches long have greater utility in thinning out bluegills and crappies due to the gape or size of a bass's mouth. Thus, three additional inches of protection increase the potential to aid in biological control of panfish. There is also the element of not only promoting "shorter time between bites" by increasing the density of gamefish, but also of the catch-and-release idea.

Waters for the Warmwater/Coolwater Species Special Conservation Regulations

Water	Size (Acres)	County
Blue Marsh Reservoir	1,150	Berks
Lake Redman	290	York
Lake Williams	220	York
Opossum Creek Lake*	59	Cumberland
Conewago Lake	340	York
(Pinchot State Park Lake)		
Cross Creek Lake	247	Washington
Lake Arthur	3,224	Butler
Kyle Lake*	165	Jefferson
Sugar Lake	90	Crawford

^{*}Recently refilled and fish populations are being initiated through fry and fingerling stockings.

Most lakes initially selected for management with the special conservation regulations had to meet certain criteria. The lakes had to be heavily fished. Thus, lakes located near major cities or those owned by the state are known to be most heavily fished. The lakes had to have relatively high fish production potential. The fish-producing potential is related to nutrients in the water, which come from the soils and watershed. The most productive areas of Pennsylvania are in the southeast and western parts of the state. The lakes recommended for these regulations must, of course, be open to public fishing.

Commission fisheries biologists and technicians have been studying the candidate lakes for some time in anticipation of the new regulations for 1987.

Angler counts and creel surveys are occurring at four lakes to document present use and harvest for comparison to what happens after the regulations have been in place a year or two. Angler opinion toward the new regulations as assessed during interviews in the creel surveys has been largely in favor of the change intended to make fishing better. Angler readers can expect to see reports from the studies in future issues.

Richard A. Snyder is chief of the Commission Fisheries Management Section in the Division of Fisheries. For their assistance with this article, he thanks Rick Hoopes, Commission Warmwater Unit leader; Blake Weirich, Area 8 fisheries manager; and Mike Kaufmann, Area 6 fisheries manager.

Creel & Size Limits for Waters under Warmwater/Coolwater Species Special Conservation Regulations

Species	Minimum Size (Inches)	Daily Creel Limit
Bass, Largemouth	15	2
Smallmouth		
Spotted		
Walleye (and hybrids)	20	2
Muskellunge (and hybrids)	36	1
Northern Pike	28	1
Chain Pickerel	20	2
Crappie & White Bass	_	10 (combined)
Sunfish		10 (combined)
Yellow Perch		10 (combined)
Catfish		50 (combined)
Carp & Suckers		50 (combined)
White Perch		50 (combined)
All other species: Statewide	size and creel limi	ts apply.

September September Trout Tactics

by Harry W. Murray photos by the author

eptember provides some of the best trout fly fishing of the season for Pennsylvania anglers. By selecting the correct type stream, identifying the existing food forms, utilizing the appropriate tactics, and choosing the correct tackle, the cautious angler can make some very impressive catches.

Determining which stream can provide good September fishing is fairly easy if you consider what a trout population needs at this time. Basically, look for streams that sustained reasonable water levels and temperatures throughout the summer for the trout's survival.

These streams fall into two separate categories. Many small headwater mountain streams provide an environment that enables the trout to survive and grow all summer. Admittedly, some of these get so low in August that the trout do not feed well at that time but they still seem to make it. The second type stream that will get trout through the tough summer months has cool springs flowing into it.

I am not talking about limestone spring creeks. Naturally, they provide good carryover, but they require specialized tactics not part of this discussion.

It would be nice if you could anticipate heavy hatches of large aquatic insects on streams in September like those of last May, but on most streams they simply do not exist. You will probably run into a few little olive mayflies, and some little yellow *Isoperla* stoneflies that made it through the summer. Many of these streams do provide heavy concentrations of *Chironomidae* midge hatches during September, and the trout feed quite heavily on them.

Terrestrials

However, the main food sources in

most of these streams in September are definitely the terrestrial insects. Ants, beetles, wasps, crickets, and grasshoppers are all still out in heavy concentrations and the trout really work on them.

You seldom hear much about fishing grasshoppers in mountain streams, but they can be very productive. Last fall I hiked several miles up into one of these little headwater streams and was very excited about finding one of the thickest concentrations of hoppers I had ever seen.

The real sleeper at this time of the year are the flying ants. I suppose one reason many anglers are unaware of their significance in the trout's diet is their small size. Most of them run from size 18 down to size 24. The colors range from chocolate brown to dark dun to black. I have seen concentrations of these insects on streams that would put the heaviest mayfly hatches to shame.

Several years ago, upon arriving on one of the little spring-fed freestoners, I saw a thick concentration of foam about 3 feet in diameter floating in a back eddy. Wondering if we were getting some type of pollutant coming into the stream, I checked it out. Had I not seen it, I would not have believed it; there were thousands upon thousands of small chocolate flying ants stacked together forming a solid raft floating around and around in that back eddy.

Yes, I knotted on a small ant and had one of the most fantastic days of dry fly fishing I have ever had. Every trout in the stream must have known the ants were covering the water because each feeding station held an actively rising fish.

Beetles also represent a significant portion of the trout's diet during September. I am not referring simply to the Japanese beetle. Some years these are very thick and it is wise to check the shrubs along the stream for their presence before you start fishing.

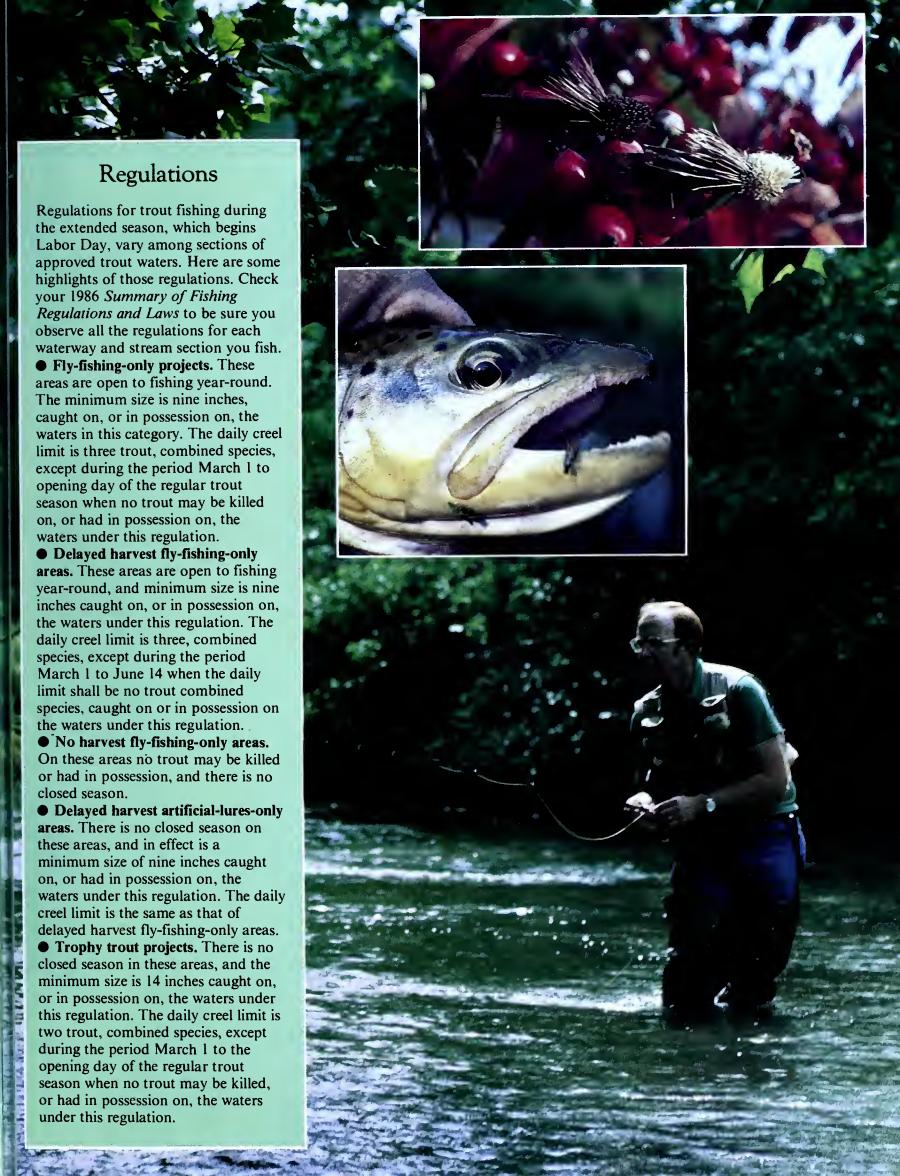
If, however, you find few Japanese beetles, there are still literally hundreds of other beetles and beetle-like insects on which the trout feed. I would definitely feel ill-equipped on any trout stream in September without a good selection of beetles.

By this time of the year, the crickets have reached a very large size and represent a good mouthful for the trout. These are found along all trout streams, and even though they are excellent jumpers and can evade land predators quite well, they are helpless when they find themselves on the stream. I am constantly amazed at how many of these I see on the stream at this time of the year. I assume many of them end up here due to wind blowing them off course.

Appropriate imitations

The little olive mayflies are well-matched with the standard blue wing olive in sizes 16, 18, and 20. I like to carry flies with several different shades of olive body material to match the specific hatch. For the last five years, I have found that I often get better results with the parachute style tie than with the conventional pattern. Not only do the trout take this pattern well, but it is easy to tie and far more visible on the water to the angler than the regular pattern.

l prefer to wait until I see these flies on the stream surface and trout coming to them before I start fishing the little olive. Once I spot a riser working on this hatch, experience has taught me to approach them cautiously. The low September water levels and the fact that many of the trout move out into the shallows to feed on this hatch produce ultraspookie fish. A hands-and-knees approach, 6x leaders, and delicate



presentation are a must.

The little yellow *Isoperla* stonefly is still on many streams, and because the trout have been feeding on them all summer, they know them well. Two most productive patterns for this hatch are the size 16 little yellow dry stone and the size 16 Mr. Rapidan dry. The natural can often be seen dancing across the water surface, and this latter tie lets you fish it in that

I do not necessarily wait until I locate a constant feeder to fish these two flies. At this time of the year, a size 16 pattern is big enough to use in fishing the water. I get more strikes on a delicate 6x leader than with heavier tippets.

Midges

The thick concentrations of Chironomidae midge hatches in September are a mixed blessing to the angler. They are good because they supply an excellent food source to beef up the trout before spawning season, and because the trout feed so heavily upon them.

This last aspect also suggests the negative feature. When these hatches are at their peak, many trout feed heavily on them almost to the exclusion of larger insects. If you dislike fishing size 22 and 24 flies on 7x leaders, it is quite possible you will find this very frustrating. My fishing partner puts himself into this group. When we confront these midge feeders, he pulls out a whole set of four letter words to describe their table manners.

However, many anglers enjoy midge fishing tremendously, seeing it as one of the most refined forms of trout fishing. One cannot rely on luck

It is truly a game of skill with a one-on-one battle between you and that one trout out there feeding consistently on tiny midges. You must select the correct size and color to match the naturals accurately. Evaluating the line of drift in which the trout is feeding to overcome drag is a must. Only an accurate presentation on 7x or 8x tippets will permit a natural drift, and lastly, you

must strike gently to prevent breaking him off on the take. Yes, very demanding but also highly rewarding.

Hoppers

Hopper fishing is almost the exact opposite of midge fishing. In fact, it is hard to believe that the same trout that sipped midges so delicately the previous evening can put on a water slashing exhibition, as he feeds on hoppers the next afternoon that would rival a 10-year-old boy in a swimming pool.

One afternoon last September, the wind was pushing many of these big number 10 grasshoppers into the stream, and several of the larger trout were going for them so forcefully that they were throwing water 10 feet as they nailed them. When you realize that by September these grasshoppers have grown to their full size and are very strong kickers on water, as well as on dry land, it is easy to explain this splashy feeding mannerism. The instant they find themselves in the water, they start kicking to make it back to the land. Sizable trout are attracted by this commotion, and realizing their dinner is trying to make a getaway, the trout swim quickly to intercept them. Kerboom!

Keep this natural hopper action in mind as you fish flies at this time of the year. I like to splat my hopper patterns in close to the bank and impart a kicking action by stripping the fly in 3-inch to 6-inch jerks with my line hand. This often takes more fish than the standard dead drift technique, although some days the fish like the quieter drift.

I like to carry hoppers from size 16 up to size 10 at this time of year. Many fly patterns are productive, but because I often apply a hopping action to my flies, I prefer the Letort and Dave's hopper to the hackled pattern such as a Joe's hopper. Because of the size of the hopper I use late in the season and violence of the strike from sizable fish, I seldom use leaders finer than 4x for this fishing. Nine or ten feet long is about right.

Ants

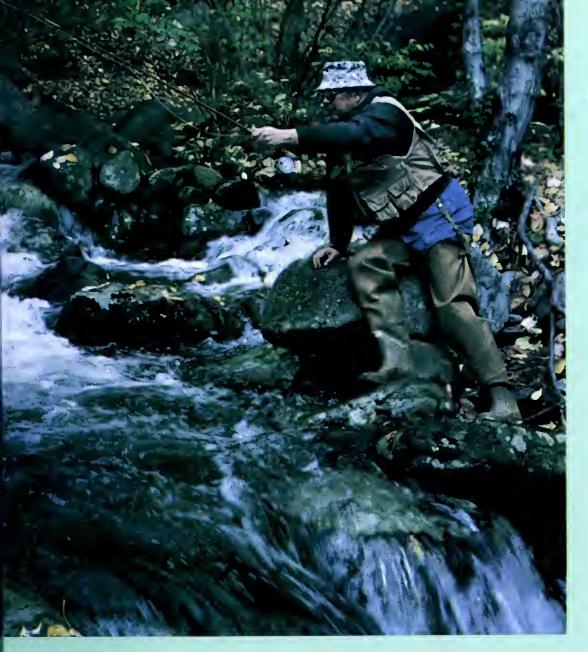
Ant fishing in September is very dependable. On many waters, both headwater and valley floor streams, this producer may be the most consistent, due simply to their concentration. They are everywhere



all the time. I feel lost without a selection of ants in black, cinnamon, and dun from size 12 down to size 24.

One little stream I fished a lot last summer held some of the most educated ant eaters I've ever seen. Within 50 yards of where I parked, a big sycamore tree shaded the whole width of the stream. Several of its limbs came down to within two feet of the stream. Why so many ants tumbled from that tree I do not know, but they did. Every time, yes, every time I walked up past that tree there were three trout feeding on ants under it. It would be nice if I could tell you how I skillfully outsmarted all three on every trip, but this was far from the case. If, after fishing to them 15 minutes going upstream and back down again, I landed one fish I felt very fortunate. They were just plain tough.

The mechanics of fishing ants to rising trout are the same as that of midge fishing. I do, however, use a size 14 or 16 dry black ant to fish the water even if I don't see risers.



Crowe beetle

The black Crowe beetle is another excellent fly in September and 1 use it from size 10 down to size 24. One very knowledgeable fishing friend told me this was definitely his favorite fall fly. It certainly is one of the most consistent producers because there are so many natural insects along the streams it will pass for.

One special beetle fishing technique is well worth passing on, although some fellows see it almost like cheating. Occasionally when you have located a big surface feeder working on small flies that is simply too smart to take on tiny flies, put on a big Crowe beetle and "hit him on the tail." You intentionally splat the beetle down on the water behind him about even with his tail and about six inches to the side. Almost unbelievably that smart old trout will sometimes turn and climb all over the beetle.

Aside from this tricky technique, the dry Crowe beetle is equally effective in fishing to sighted risers and simply covering the water. Be sure to taper your leader down to 6x or 7x for the size 22 and 24 ties, but 4x is fine for the larger sizes.

Crickets

If I were restricted only to one fly for all my September trout fishing, it would definitely be Shenk's cricket. Crickets are now present in a variety of sizes all the way up to a fat size 10, and they will definitely bring up the largest trout in the stream. I like to start my days trout fishing as close to sunrise as I can. At this time of the day, crickets are very active, whereas hoppers seem to move about more as the sun warms things up.

I use basically the same fishing techniques for crickets that I do for hoppers. However, there are several situations in which I get better results with crickets. It is definitely a better fish-finding pattern. If I am fishing an unfamiliar stream and cannot seem to locate the fish, I always reach for a big cricket. Dropping it in tight to the bank and stripping it to produce a kicking action normally brings up



some lookers that neglected every other fly in my vest.

September rains often produce a slight grayish-brown discoloration of the streams that makes dry fly fishing difficult with conventional patterns. The cricket saves the day for you in these situations. Its black color makes it more highly visible to both the trout and the angler in slightly dingy water.

Nymphs, streamers

By late September, you occasionally get enough rain to cause significant discoloration of some of the largest streams, especially in the northern part of the state. This necessitates the use of nymphs and streamers. Dark flies such as a size 8 black stonefly nymph or a size 8 black marabou muddler often outproduce all dry flies.

Another factor to consider in September trout fishing in Pennsylvania is the size of the state and how the cool nights of late September can affect water temperatures. It is quite possible to have good dry fly fishing in the southern part of the Commonwealth one day and drive up north to Potter County the next day and find the water temperatures cool enough to require switching over to nymphs to move the fish.

Delicacy and accuracy should be the two guides in selecting tackle for September trout fishing. A 4-weight floating line in either weight-forward or double taper is ideal. I like to use a 7½-foot rod for a 4-weight line in the small headwater streams, but step up to a 9-foot rod for a number 4 line on the larger streams.

A lightweight single action fly reel is ideal for the delicate action rods. Be sure it has a very light drag to protect the fine leaders used at this time of year. Leaders should be from 8 to 10 feet long and tapered from 4x for larger flies down to 7x for the smaller flies.

By utilizing a cautious approach and duplicating the existing natural food, you may find the best trout fishing of the entire season in September.

rt Michael

Dream Smallmouth Bass Float Trip

by Rhume Streeter



he Keystone State has some of the finest float-fishing waters for smallmouth bass. Out of these hundreds of miles of fishable waters, one of the very best is located right in sight of the copper-domed state capitol building. The area is readily accessible, the float is short in overall fishing distance, it is relatively danger-free, and best of all, you catch fish on it.

The float site is on the Susquehanna River just north of Harrisburg. The starting point is from the Fish Commission access at Fort Hunter, below the village of Dauphin. The ramp is located off routes 22 and 322, where Route 443 intersects. It is on the east side of the river, and Fishing Creek empties into the Susquehanna below the ramp. The facility is well-kept, the ramp is

adequate in size, and parking is ample.

The take-out point is at the Commission's West Fairview Access, four miles downstream on the west bank of the river. This launch site is off U.S. Route 11, across the river from Harrisburg. It is situated adjacent to where the Conodoguinet Creek drains into the Susquehanna. It, too, furnishes lots of parking space

and is perfectly located for easy egress from the river.

Boats used for this trip should be the 14-foot semi-vee type with a matching 9.9 horsepower or similarsized motor. Because this section of the river is rocky, prop guards are necessary. These devices can be purchased from marine manufacturers like OMC, or you can utilize the kind that are handmade from pitchforks.

Smallmouth habitat

Depths in the Susquehanna range from 4 to 6 feet throughout most of the river with a few pools bottoming out at 15 to 20 feet. Be sure to have a good anchor and at least 60 feet of line to allow for plenty of scope when you anchor in the currents. Like any other fishing trip, wear your PFD while on the water.

On this float, from starting point to take-out is only a short four miles, but what a magnificent stretch of bronzeback water it is! Scores of islands sprawl out over the river that range in size from a few square yards to the long and narrow McCormicks Island, which extends downstream for almost a mile. Clusters of islands about the size of football fields are grouped downstream near the take-out point. All these provide a wealth of sensational habitat.

Shale rock ledges in layers or tiers jut up from the bottom and cross and criss-cross this watercourse for the entire four miles of the float. These ledges form hundreds of riffs and glides where smallmouth find waters that offer both feeding and resting zones. To go along with the abundance of underwater cover, thick bushes grow along every shoreline and on every island.

The prime time for floating the Susquehanna for smallmouths is the month of October. River levels are usually at optimum heights, 3.5 feet at the Harrisburg gauging station, and water temperatures are falling toward that magical 60-degree mark when smallmouths gorge themselves. The second choice for a float trip here is the month of June.

Tackle, lures

If you are a spin-fisherman, stick with the 4-pound-test to 6-pound-test lines for ultralight rigs and 8-pound-test line in larger standard outfits. Many artificials are effective in



A fork, like the one pictured here, or some other propeller guard is a must on this float. If your prop isn't protected, bring plenty of shear pins and a spare prop. The Susquehanna is riddled with rocks wreak havoc on outboard motor propellers.

October. For the surface fisherman, use the ½-ounce lures that have propellers on them or the chugger/darter types. Make sure that these are fished slowly. Concentrate on the areas where the surface is slick and free of ripples. Just off the side of the riffs where slow-moving waters indicate some depths are where the surface lures work best.

With underwater lures, a selection of both shallow-running and deep-running lures should be a part of your tackle box. Use the shallow runners where the riffs don't exceed the normal 4 to 6 feet. Those crayfish imitating lures are dandy now. Cast your lures across the riffs and let the current work the lure until it tails out, then retrieve slowly. In the deep pools, use deep-running lures and put most of your effort into working the section where currents are most subdued.

Spinners are also effective, and silver-bladed models with a feather-covered treble hook are best. Take along a variety of feather colors. White, black, and yellow are favored colors. Lead-head jigs with twister tails are fine for bouncing slowly along the bottom and rousing the resting fish. The 1/4-ounce size with a 2-inch tail are ideal baits.

Anglers who prefer baitcasting outfits do best with ½-ounce surface or sub-surface lures and the spinners and jigs in the same weight range.

This arsenal necessitates the use of lighter lines to be able to handle that weight lure.

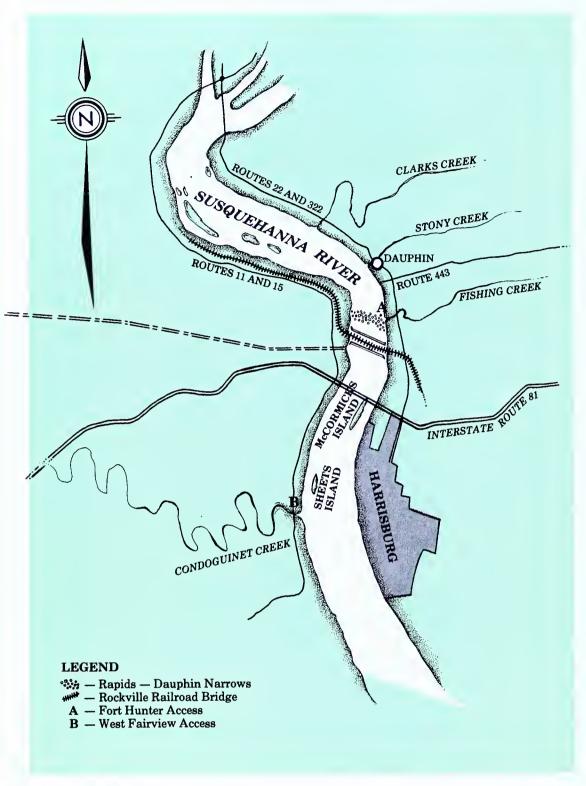
For the fly rodder, hair frogs and poppers in sizes from the smallest 4 down to a respectable 1/0 are suitable. Wet flies tied on size 2s or 4s with some built-in weight tied in the drab browns, tans, or blacks do better than the more visible colors. There are some sizable stonefly hatches on the river during October, and these generally occur during the midportion of the day. Hair bugs and poppers perform best in the normal green and yellow combinations or in the browns of bucktail. Keep a few solid white hair bugs in the fly box. At times this is the only color that will take bass.

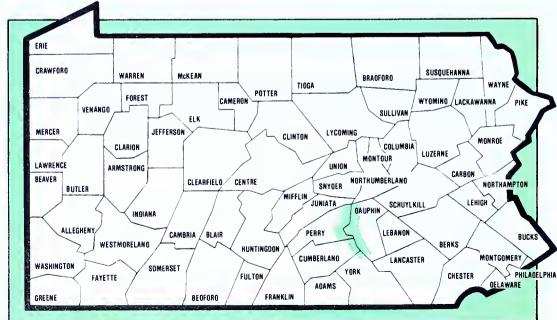
Bait users will do well during
October with the usual choices —
nightcrawlers, minnows, and if you
can get them, hellgrammites.
Grasshoppers collected from fields
after they become active in the cool
mornings are excellent baits now, too.

Hotspots

Even though this trip is fairly short, it could easily take up a full eight hours if you fish diligently. Some of the riffs and glides are so good that it's impossible to resist starting up the motor and running back up through to get another pass at the great water.

Make sure that you are going to be





off the water before nightfall. It's no fun being out on strange water after daylight so that nighttime fishing is unnecessary.

The Dauphin Narrows, a series of rock ledges that traverses the river shortly after launching, are the only rapids in this 4-mile float. They are swift enough to prevent you from anchoring, but pose little problem to a boat drifting through them. Fishing down through these narrows, use jig and twister combinations or other lures that offer little resistance to the water. You move down through the rapids at a respectable pace.

The Dauphin Narrows is actually upstream from the launch site. Still, the fishing is good there, so you might want to head upstream from Fort Hunter to this area to sample the action.

The piers around the Rockville Railroad Bridge are hotspots that all have some deeper pockets around their bases. Just upstream from this bridge there are remnants of a few deteriorating piers from a long-abandoned railroad crossing. The area around each of these is a notable hotspot. Around the abutments of the 1-81 bridge merits a little extra attention as you float on by, too.

Each of the scores of islands here presents pocket after pocket of great-looking bass water that is hard to pass by. The leeward sides of these islands are a lot easier to fish on days when there is a little wind, but the windward sides on days like this are where you will catch fish.

Both sides of the river in this area are fairly well-populated and have hotels, motels, and eating places close to both the launch and the take-out point. Renting a boat here is next to impossible, necessitating bringing your own rig. Just about all the shorelines on both sides of the river are open to fishing, but because of the quick dropoffs and the slick bottom, wading is treacherous. If you intend to take any fish, the limit is 6 bass, and bring along a cooler. You can buy ice at many places along the river.

Have a good time on this majestic waterway that the Susquehannock Indians called "the long reach river." [PA]

Pennsylvania ANGIER The Keystone State's Official Fishing Magazine

Reader Survey

he Commission surveys *Pennsylvania Angler* readers so that it can keep fine-tuning magazine content and continue to provide readers with the kind of features they want most. We invite all subscribers to complete this survey. This information will be used in no other way except to understand better our readers' likes and dislikes.

We'd appreciate your providing us with all the information we seek, but you don't have to answer questions you find objectionable for any reason. Please also skip questions that don't apply to you. Our deadline to receive completed surveys is September 30, 1986, and we look forward to receiving your survey by then. Please tear this one page from the magazine and mail completed surveys to: *Pennsylvania Angler* Survey, P.O. Box 1673, Harrisburg, PA 17105-1673. Thank you for assisting us.

	isting us.	A 1/103-16/3. Thank you for
rc		sh species, please number <i>in</i> or which you fish. Indicate no
	bass	pickerel
	pike	trout
	muskies	walleye
	shad	salmon/steelhead
	panfish	suckers
	eels	catfish
	striped bass/hybrids	other species
ha		do you use? If you use more in order of preference, but
	fly rod	spinning tackle
	baitcasting tackle	downrigger
3.	Do you fish through the ice	? Yes No
1.	Do you tie flies?	Yes No
5.	Do you use at least one cus	tom-made fishing rod?

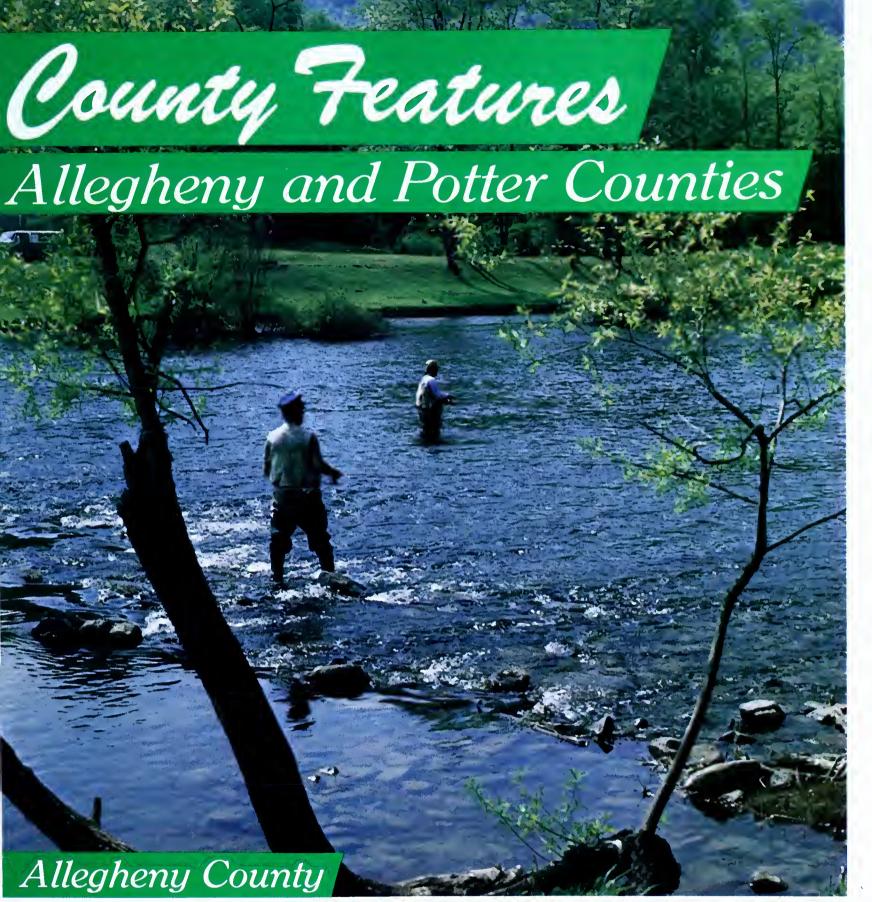
_ No

_ Yes

6. Do you build your own rods? Yes No
7. Do you make your own lures and tackle, such as jigs, blastic worms, and sinkers? Yes No
8. Do you own a boat or canoe? Yes No
9. How many watercraft do you own?
only one two three or more
10. Mark with an "x" the size of your boat. (If you own more than one boat, mark the size of the one boat you most frequently use.)
less than 12 feet 12 feet to 14 feet
over 14 feet to 16 feet over 16 feet to 18 feet
over 18 feet to 20 feet over 20 feet
11. Mark an "x" in the appropriate spaces that describe your boat, or the <i>one boat</i> you own and use the most. Be sure to check all that apply.
Power
outboard inboard or I/O electric other
Hull design
vee-bottom tri-hull johnboat canoe houseboat pontoon boat
Construction
wood metal fiberglass inflatable
12. If you own a boat, do you use a gas motor?
Yes No
13. Do you use an electric motor? Yes No
14. If you use a gas motor, what horsepower is the one engine you own and use the most?
0-5hp 6-10hp 11-35hp 36-75hp
75-110hp 110-150hp more than 150hp
15. Mark an "x" in the space next to the items you own:
depth sounder (graph, LCD, flasher, or video)
downrigger(s)
VHF marine radio CB radio (for boat use)
LORAN (navigation aid) compass
16. Do you trailer your boat? Yes No
17. Do you read <i>Pennsylvania Angler</i> from cover to cover?
Yes No

18. Rate the following Angler columns on how much they interest you and how regularly you read them:

Low interest		Н	igh i	nterest	
1 2	3	4	. 5		
"Regulation Roundup"					20 In addition to fishing indicate with an "v" in the
"The Law and You"		-			20. In addition to fishing, indicate with an "x" in the appropriate spaces the other activities in which you
"Notes from the Streams"					participate:
"Straight Talk"				7	water skiing white-water rafting
"Anglers Notebook"					
"Mail"			†		sailing canoeing
19. Please indicate with an "x" in the		e,	ne		cruising kayaking
appropriate spaces your ideas on		mor	saı	less	21. In what Parmoulusnia county do you fish the most?
the following kinds of articles:		ish	the	lish	21. In what Pennsylvania county do you fish the most?
		publish more	keep the same	publish less	County
How-to-do-it articles		†	~		
river fishing					22. Are you a member of Trout Unlimited?
float fishing					Yes No
pond fishing					23 Are you a member of B.A.S.S.? Yes No
stream trout fishing					23. Are you a member of B.A.S.S.? Yes No
bass fishing					24. Are you a member of any other organized sportsmen or
walleye fishing					conservation club or group?
panfishing					Yes No
large-lake or reservoir fishing					
Lake Erie fishing			ļ <u>.</u>		25. How long have you been fishing?
boating (for fishermen) skills, navigati	on				0-3 years 4-8 years 9-15 years
rod building			ļ		16-25 years 25-40 years more than 40 years
fly tying				 	
lure making					26. What is your age?
			ı		under 13 13-16 16-19 20-24
Where-to-go articles					25-30 31-40 41-50 51-64
Fishing in specific waterways					
General information and	Ì				over 64
entertainment articles					27. How long have you been a Pennsylvania Angler
nostalgia/history					subscriber?
humor				1-1-	1 year 2 years
general entertainment					3 years 4 years
articles on fishing					5 years 6-10 years
natural history					5 years 6-10 years
("Profile," for instance)					11-15 years 16 or more years
Conservation					28. Are you a <i>Boat Pennsylvania</i> subscriber? Yes No
environmental concerns			ļ		
habitat protection					29. In what Pennsylvania county do you live?
studies and research					County



Russ Gettig

by John E. Mahn, Jr.

llegheny County is the home of the nation's steel city, Pittsburgh. Many of the country's largest corporations are headquartered here. In spite of its industrial reputation, fishing opportunities abound in Allegheny County. The Allegheny River, flowing south out of New York state, and the Monongahela River, flowing north from West Virginia, converge in Pittsburgh to form the Ohio River. This "three rivers" area ranks third, behind Lake Erie and Lake Arthur in terms of warmwater fishing in the western part of the state. In addition to its warmwater fishing, the county also has a number of trout waters.

Warmwater fishing in Allegheny County is confined primarily to the four major rivers. Increased gamefish populations are due to improved water quality and an excellent forage base. In general, fishing peaks in all the rivers at about the same time. Walleye fishing is usually best from February, until the season closes in the middle of March. Bass fishing, although good all year, peaks from May to mid-June in all four rivers. Muskies, wherever present, seem to bite best in the fall.



Allegheny River

A series of locks and dams on the Allegheny provides anglers with outstanding walleye fishing from February until the close of the season. Minnow-tipped jigs account for most of the early season walleye. Remember to stay off the lock walls, and remain below the buoys when fishing from a boat. In addition to the walleye, smallmouth bass fishing is also very good along the entire length of the Allegheny, beginning in May. The mouth of Pine Creek is another good spot for walleye and bass, although heavily fished. Minnow-tipped jigs or live bait are the best producers. A fee launch area is located at Chiefo's Marina below the Highland Park Dam. Anglers looking for channel cats should try fishing around the bridge abutments so common in the Pittsburgh area. These structures draw catfish like magnets.

Continuing upstream, the next dam is the Harmer Dam. The Commission Deer Creek Access is located below the dam. This access area can be reached off Route 28 in Harmerville. A good spot for bass and walleye in this area is the back channel below Twelve Mile Island. Another hotspot for smallmouth is the Sharpsburg area, usually around the first week in June. The Braeburn Dam is next, and from the dam downstream to the mouth of Chartiers Creek is a good area for bass and walleye. In July, the Oakmont area produces big flathead catfish, some going 20 pounds or more. Chicken liver seems to be the best catfish bait. This portion of the Allegheny also produces some nice muskies every year. From the mouth of Bull Creek down to the New Kensington bridge is a musky hotspot in the fall. This area is also good for channel cats most of the year.

Other hotspots on the Allegheny include the Harmer Mine channel, below the Deer Creek Access. This area is posted for shore anglers, but boaters can enjoy fast crappie action in the spring. It also produces good rock bass well into summer. Puckety Creek, outside New Kensington, has good numbers of carp for rod and reel or bow anglers. Below Freeport, walleye fishing is very good in the fall, while lots of crappies are taken during the spring. Concentrate on the back channels. The mouth of Buffalo Creek is another good spring walleye spot. As an added bonus, each pool on the Allegheny also received between 1,500 and 2,000 sunshine bass. Some of these fish should now be in the 5-pound range.

Monongahela River

The Mon River marks a portion of Allegheny County's southern border, and from here all the way to the "Point" in Pittsburgh fishing for all warmwater species is excellent. Early season boat anglers take walleye and bass in the warm water around the Duquesne Light Company in Elrama, and near the Mitchell Power Station less than a mile upstream. Minnow-tipped jigs will take most of the early season fish. As spring weather warms things up, clouds of baitfish begin appearing around the two dams located on the river. Once the baitfish arrive, smallmouth bass activity around Lock and Dam #3 at Elizabeth begins to improve.

Minnows are the top bait, but small silver or gold crankbaits also take their share of bronzebacks. Anglers might also expect to tie into some of the sunshine bass that have been stocked in the Mon. These hybrids follow the schools of baitfish and feed on them in the open areas close to the dams. Sunshine bass from the original stocking are now in the 5-pound to 7-pound range.

Unlike the bass and walleye fishing, which is good almost anywhere along the Mon, panfishing is hot in some areas, fair in others. The Coal Valley area is one of the perch hotspots on the Monongahela. Yellow perch up to 13 inches and weighing more than a pound have been reported. Farther downstream, in McKeesport, the Youghiogheny River flows into the Mon. The confluence of these two rivers has become a crappie hotspot. Minnows, small twister tails, and white or yellow wet flies all fished parallel to the bank are effective.

Farther downstream, Lock and Dam #2 at Braddock is another bass and walleye hotspot. From early February until the season closes, this area produces walleye. Later in the spring, as the walleye fishing slows, bass fishing picks up. For smallmouth, this is one of the best spots in the county. From here to the point, concentrate on areas where small streams enter the Monongahela, and any of the many bridge supports located in the river.

Boat access along the Monongahela is good, but last year's flooding left some of the ramps in need of work. The Commission ramp is on the south side in Pittsburgh, off Route 837 (E. Carson St.) at 18th Street. Another Commission access is located off Lyle Boulevard in McKeesport. This ramp has recently been refurbished, and can accommodate two boats at a time. Two public ramps are available in Monongahela, near the Allegheny County line, one in Elizabeth, and one near the Point, maintained by the City of Pittsburgh.

Youghiogheny River

From Sutersville down to the river's mouth in McKeesport, the Yough produces crappies, smallmouth bass, perch, walleye, an occasional trout, and some nice bluegills. Artificials as well as live bait get good results.

From Boston on down is a good stretch for taking channel cats, with nightcrawlers and chicken livers the top baits. Shore access along this portion of the Yough is limited. The river is more suited to floating in a small boat or canoe. Depending on water levels, you may or may not have to leave your craft to float over some areas.

Ohio River

The Ohio River, formed by the confluence of the Monongahela and the Allegheny, flows for some 13 miles through Allegheny County. The best fishing is found around some type of structure, either natural or man-made. The Emsworth Locks and Dams on Neville Island provide good early season walleye and bass fishing. Anglers are also starting to pick up sunshine bass, some weighing up to 5 pounds. The back channel of Neville Island is also a good spot for boat anglers if fished early in the morning, before barge traffic becomes too heavy. Jigs and flies can be counted on to turn up smallmouth bass along with crappies and bluegills. The area below Davis Island is a good spot for muskies.

Farther downstream, the Dashields Lock and Dam is another top producer. In the spring, walleye fishing here ranks as some of the best in the state. Walleye in the 22-inch to 24-inch range are not uncommon. Jigs and minnows account for most of the fish, but K-O Wobblers produce well, too. Yellow perch and freshwater drum can be taken with worms, while smallmouth and sunshine bass prefer minnows or minnow imitations. Spotted bass can be found nearby in the Leetsdale area, around the mouth of Sewickley Creek. Shiners and small Rapalas are the best baits.

Trout fishing in Allegheny County is confined to the lakes located in the county parks and to four streams. Stocked before and during the season, these waters produce best from opening day to about mid-June.

North Park Lake

The most heavily stocked trout water in the county, it is also the most heavily fished. Opening day, 10,000 anglers will crowd this 70-acre lake, fishing from small boats to shore. The lake is stocked with browns and rainbows, and baits include worms, cheese, spinners, and mealworms. The lake also has some largemouth bass and panfish. Hours are from 6 a.m. to midnight, and no motors are permitted on the lake. The park is located between Route 8 and Route 19. The best access is off Route 910.

Deer Lakes

Located within a park bearing the same name, these three lakes make up an area specifically designed for fishing. The upper lake, about 7 acres in size, is stocked with browns, rainbows, and occasionally brook trout. The usual trout baits produce here, and sometimes take a good largemouth. The middle lake covers about 5 acres, and the lower lake about I acre. The lower lakes are equipped with special piers to allow access for the handicapped.

In addition to trout, all three lakes have good panfish populations. One of the most scenic areas in the county, Deer Lakes Park is not as heavily used as North Park, and offers good access and ample parking. Hours are from 8 a.m. to sunset. The park is located off the Orange Belt, near Russellton.

Big Sewickley Creek

A small stream that forms a portion of the Allegheny-Beaver county line, Big Sewickley is stocked both prescason and inseason with rainbows and browns. Minnows, spinners, worms, and cheese all produce well. To reach Big Sewickley, take the Red Belt west from Route 19. This route parallels the stream for much of its length.

Pine Creek

Pine Creek flows out of North Park Lake, and is heavily stocked before and during the season. Members of the Allison Park Sportsman's Club float stock the stream. Browns and rainbows make up most of the stockings, but the stream also receives some trophy palominos from time to time. Areas off Wildwood Road west of Route 8 offer the best access.

Deer Creek

Deer Creek parallels Route 910 for most of the stocked area. It receives one preseason and two inseason stockings. Float stocked by the Tri-County Trout Club, fish are well-distributed. The best area seems to be around Emmerling Park in Indiana Township.

Bull Creek

Stocked from Millerstown down to the Tarentum Access, Bull Creek gets one preseason stocking and two inseason stockings of browns and rainbows. To reach Bull Creek, take the Red Belt east from Route 8 at Bakerstown. From Millerstown down to where it flows into the Allegheny River, Bull Creek parallels the Red Belt.

For their assistance with the Allegheny County feature, the author thanks WCO George Gerner, Allegheny County (east); WCO Jim Ammon, Allegheny County (south); and WCO Mike Wheale, Allegheny County (north).

Potter County

by Dave Wolf

otter County, God's Country. The county has been labeled as such for a number of reasons. The deer hunting capital of Pennsylvania is one, and the fact that only 18,000 people live in a county of 1,042 square miles helps as well. The last of the remote areas of the Commonwealth, Potter County attracts more visitors per year than residents. But perhaps Potter's biggest charm is that it boasts over 800 miles of trout water, that it is the home of the native brookie and the wild brown, and that it plays host to a multitude of stocked trout per year.

It holds more than trout, especially in the lower reaches of the Allegheny and Oswayo, but the scattering of muskies, pickerel, and smallmouth bass that reside there attract few. It is the trout that Potter County manufactures, and it is the trout that brings the anglers. It would be impossible to list the names of all the streams within the county, so here are some of the more popular.

Allegheny River

The headwaters of the Allegheny begin above the town of



Some of Potter County's better trout fishing bets include the Allegheny River, Kettle Creek, the West Branch of Pine Creek, and the First Fork of Sinnemahoning Creek.

Cole paralleling Route 49 northeast of Coudersport, the county seat. Brook trout and wild brown trout mingle in the waters from here to eight miles above Coudersport, where stocking takes over and the fishing is excellent. The stream flows through the county seat, where fishing is impossible because of a flood control channel, but below town to the county line things improve.

Big trout water exists below Coudersport, and browns of 20 inches or more are annually taken from these waters. Stocked by the Commission and local sportsmen groups, this section of the Allegheny can be tremendous. It can also be fickle as most good trout water can be, and it gives up its larger trout quite grudgingly.

First Fork of the Sinnemahoning

As with most freestone streams in the county, the headwaters of the Fork provide fair to good angling for the native brook trout, then as it moves downstream it turns into a good wild brown trout fishery, and finally a put-and-take stocked trout stream.

By the time the Fork reaches the small community of Costello, it has taken on the characteristics of a stocked trout stream.

Stocked with browns, rainbows, and brookies, the Fork allows comfortable fishing as the stream widens through some of the nicest country around. There is an annual green drake hatch, and a variety of caddises and mayflies hatch regularly from the opening day to mid-June.

Kettle Creek

Perhaps the most noted of Potter County streams, Kettle parallels Route 144 in the southern sector of the county. Brookies and browns are found in the headwaters. At the Route 144 bridge, a no-harvest, fly-fishing-only area extends upstream for 1.7 miles offering good fishing for wild brown trout populations found there. Downstream from the bridge, stocking takes over and to the village of Cross Forks this waterway offers excellent fishing before flowing into Clinton County.

Kettle, like all the county's freestones, offers a wide variety of fishing opportunities with good pool/riffle ratio. Rains affect the freestones of the county, causing them to rise quickly and often become discolored. Low flows are common after long dry periods, and streams do warm during the summer months.

Lyman Lake

The most popular impoundment in the county, it offers excellent fishing for trout. In fact, a brown of 29½ inches, 9 pounds, 10 ounces came from this lake a few years ago. The 40-acre lake allows good shore fishing and boating for non-powered and electric motors only.

Heavily stocked by the Commission and local sportsmen's groups, Lyman Lake is an extremely popular fishing spot for those who like still-water fishing for trout.

Lyman Lake can be reached just off Route 144 south of Galeton.

Lyman Run

Immediately upstream of Lyman Lake lies the headwaters of Lyman Run. A 4-mile stretch of this beautiful little stream is regulated as fly-fishing-only. The regulations allow three trout per day, nine inches or better except from the period of March 1 to the opening day of trout season, when no harvesting of trout is allowed.

The fly fishing stretch carries an abundance of native brookies and some wild browns of good size. Because of the stream's small size and the difficulty in casting that the wooded area creates, you will find the fishing there uncrowded.

Angling is difficult because of the clear water and the skittish brookie, but for the angler with stealth and patience this can be a little gem. Below the lake, Lyman Run widens and is the recipient of stocked trout—brook, brown, and rainbow—and provides good fishing.

Oswayo Creek

The Oswayo in the northern sector has received wild trout status in the upper reaches above Coneville and just off Route 244. The wild trout section offers excellent fishing with the smaller stream cutting tremendous holes as it weaves its way through the farmland valley. Below Route 244 the stream is stocked with a variety of trout, and again the characteristic of large, deep pools offers interesting fishing on the now larger waters.

Genessee River

The Genessee River has three branches within the county and all offer fishing for stocked trout. The west branch, the middle branch, and the main stem of the river itself. Again, good pool/riffle ratios offer good fishing in this area. At the northern tip of the county, all three branches can be found off Route 449 near Harmontown.

Pine Creek

Pine Creek reminds me of the brawling rivers of the West—a creek that can be hazardous to wade during the high waters of spring and then reduced to a low, mild flow during the summer months. It takes a lot of casting to learn this river, which parallels Route 6. But it is an enjoyable, scenic stream to fish, and does offer quite a variety of stocked trout.

Cross Fork Creek

Just off Route 144 near the town of Cross Fork lies Cross Fork Creek, a stream that is no longer stocked, under the progressive Operation FUTURE management of Pennsylvania trout streams. Good populations of wild browns and a spattering of brook trout exist here. The fact that it is no longer stocked has lessened the crowds here, but anglers in the know realize that fishing on the 5.4-mile fly-fishing-only stretch is excellent.

What few people realize, however, is that just above the fly fishing stretch lies water that is extremely good for both native brookies and wild browns and it is open to all types of fishing.

East Fork of the Sinnemahoning

The East Fork is one of the quality streams of the county that holds wild browns, native brooks, and an occasional

rainbow that is held over. It is stocked by the Commission preseason, and a local sportsmen's cooperative nursery stocks it inseason. The Fork is a high-quality stream that offers a wide variety of angling from the lower section, which has all three species of trout, to the upper section, which is classified wilderness, and contains primarily native brookies.

It can be found just off Route 872 near the small town of Wharton in the southern part of the county.

Brook trout

Because of the fragile environment where brook trout are found, and the fact that good brook trout streams are unable to host a large number of anglers, I will refrain from naming brook trout streams as such. But the solution is simple. Pick any small tributary to one of the streams mentioned in this article and you will find wild brook trout. Fishing for the brookie calls for light lines and the awareness that brook trout will not tolerate anyone stumbling up to a pool and casting a line. A shadow or splatted lure will send the brookie into hiding for an hour or more, as will an angler working the stream before you.

Luckily, however, an angler who can sneak to the water's edge and cast accurately will find the brook trout non-selective. They will take practically any morsel of food cast their way, although the common garden worm will take as many fish as any other method.

Brook trout found in these remote mountain streams will average six to seven inches, and a 10-inch one is a good one, one of 12 inches or more is a lifetime trophy.

Fishing in Potter County in general

Most if not all of Potter County streams are freestone in nature. What this means is that early spring conditions are usually accompanied by high waters that are often off-colored. Fishing deep and slow is required this time of the year. Worms, nightcrawlers, grubs, and salted minnows work best, but nymph fishermen and those lure fishermen who cast and retrieve their lures slowly and deeply also do well.

As the waters recede, hatches of caddises and mayflies become more prevalent. From the end of April to the beginning of June, the fly fishing is at its best with a variety of Cahills, sulphurs, march browns, hendricksons, and blue quills. Of course, adult caddises are also available and the dry fly and wet fly fishermen really shine.

Both nightcrawlers and worms also do well during this period, and the live-minnow fisherman usually scores on the biggest browns of the year.

As summer warms the now low waters, night fishing is the best bet. July and August offer little relief in the way cooling waters and a good number of the larger trout feed after dark. Daytime fishermen who are willing to locate spring holes and search the smaller tributaries will find trout in good numbers as they move to escape the thermal pollution of the larger waters.

Fall finds caddises and pale evening duns over the water, and fly fishing returns on the small and medium-sized streams of the county. Bait fishing and lure fishing works well now also, as the trout begin to search for spawning grounds with the spawning of browns and brook beginning in mid- to late October.



Rhume Streete

by Art Michaels

n 1985, 157 Senior and Junior Angler's Awards were offered for smallmouth bass catches. Here's the lowdown for Pennsylvania anglers who want to catch the Keystone State's biggest bronzebacks.

When to fish

Citation-sized smallmouths were caught during the entire year, except in January and February. Four were caught in March, 11 were taken in April, 43 were fooled in May, and 28 were creeled in June. In July, 21 were caught, 15 were caught in August, and 15 more were taken in September. In October, 17 smallmouths were fooled, two were taken in November, and one was caught in December.

Baits, lures

Live baits, including worms, crayfish, minnows, and hellgrammites, accounted for 51 of the 157 smallmouths caught. Worms fooled 14, crayfish accounted for eight, and two were taken on hellgrammites. Minnows took 27.

Some kind of artificial lure accounted for 104 smallmouths. An unspecified lure, probably some kind of crankbait, took 48. Jigs with plastic action tails took 22 smallmouths, a Jitterbug was used to nail five fish, and swimming or diving crankbaits, including Rapalas, Rebels, Killer Bs, and Big Os, took 23 fish. Plastic worms fooled two, spinners took three, and a spoon accounted for one.

The baits or lures used to take two fish are unknown.

Where to fish

Pennsylvania anglers caught citation-sized smallmouths in 26 waterways in 30 counties. Here listed by county are the specific waterways where smallmouth bass were caught and how many bass were taken at each spot.

Adams County, Birch Run Dam 1 Armstrong County, Keystone Lake 1 Bedford County, Juniata River 1 Berks County, Ontelaunee Reservoir 1 Bradford County, Susquehanna River 1 Bradford County, Wyalusing Creek 1 Butler County, Slippery Rock Creek 1 Cambria County, Hinkston Run Dam 1 Crawford County, Conneaut Lake 1 Crawford County, French Creek 1 Cumberland County, Conodoguinet Creek 2 Cumberland County, Susquehanna River 2 Dauphin County, Juniata River 1 Dauphin County, Susquehanna River 5 Erie County, Lake Erie 103 Fayette County, Youghiogheny River 1 Forest County, Allegheny River 1 Franklin County, Conococheague Huntingdon County, Raystown Lake 1 Lehigh County, Leaser Lake 3 Luzerne County, Harveys Lake 1 Luzerne County, Susquehanna Lycoming County, Susquehanna River 1 McKean County, Allegheny Reservoir 1 Mercer County, Shenango Lake I Montgomery County, Perkiomen Creek 2 Northampton County, Delaware River 1 Northumberland County, Susquehanna River 1 Perry County, Juniata River 2 Perry County, Susquehanna River 1 Philadelphia County, Schuylkill River 1 Pike County, Lake Wallenpaupack 1 Snyder County, Susquehanna Venango County, Allegheny River 1 Wyoming County, Susquehanna

To qualify for a Senior Angler's Award (persons 16 years of age and older), a smallmouth bass must weigh at least four pounds. Minimum smallmouth bass weight for a Junior Angler's Award (under 16 years of age) is three pounds. For more details, send a business-sized self-addressed, stamped envelope to: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

York County, Lake Redman 2

York County, Susquehanna River 5

River 1



September/October

C Closeup P

Last September's smallmouth bass catches were varied. Five citation-sized fish were taken on live baits, including one fish each on a minnow, crayfish, and hellgrammite, and two fish on worms.

Artificial lures accounted for 10 of the 15 September smallmouths. These lures included four unspecified plugs, one spoon, three jigs with plastic action tails, and two spinners.

Eight smallmouths were caught in Lake Erie. Two were taken from the Snyder County portion of the Susquehanna River, and two more were caught in Lehigh County's Leaser Lake. One fish each came from Birch Run Dam (Adams County), Ontelaunee Reservoir (Berks County), and the Allegheny Reservoir (McKean County).

Last October, 17 awards were offered for citation-sized smallmouth bass. Anglers caught 10 in Lake Erie, and only one of those 10 was taken on an unspecified live bait. The other nine were caught on some kind of plug.

One October smallmouth was caught with a plastic worm from the Northampton County portion of the Delaware River. The Perry County section of the Juniata River accounted for another smallmouth, which was fooled by a minnow.

The Susquehanna River in Northumberland, Wyoming, Luzerne, York, and Dauphin counties each accounted for one smallmouth bass. The fish caught in Luzerne County took an unspecified live bait. The Dauphin County smallmouth grabbed a Mepps spinner. The York County fish fell for a jig with a plastic action tail. The Northumberland County lunker was caught on an unspecified lure, and the Wyoming County bass took a Big O.

Thus, 14 of last October's 17 citation-sized smallmouths were caught on artificials. Live bait accounted for only three bass.

ANGLERS CURRENTS

Revised, Updated Map Available

The Fish Commission's Fishing and Boating Map with the official PENNDot map has been revised, updated, and reprinted. One side of the map features the full-color PENNDot map of the Keystone State.

The other side of the map lists lakes, access areas, streams, fish culture stations, and regional law enforcement headquarters with their locations specially coded on a smaller map of Pennsylvania. The lists include additional useful information on the lakes and accesses in Pennsylvania.

The map is available free from: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. With requests please include a self-addressed business-sized envelope with two first class mail stamps.

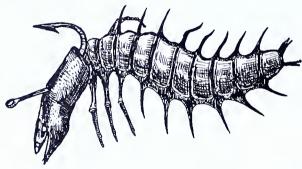


Green, even in September, means largemouth bass. For best action, try your favorite weedless lures in and next to thick aquatic growth.

Fall temperatures cool trout streams, allowing populations to move out of their deep holes. Give the same areas a try that you fished back in May.

The wet metal of your boat trailer can be slippery and hazardous when balancing on the tongue or supports during launch or retrieve. For non-slip footing, glue indoor-outdoor carpeting with contact cement to the surfaces you'll use most.

Early fall brings fast smallmouth bass action. Hellgrammites, stone catties, and shiners are top baits. The Bomber brown crayfish, Rebel perch, and Rapalas are hot lures.



On many boat launching ramps, trailers disappear from the driver's sight while backing down to the water to retrieve the boat. Mount a long-stemmed bicycle safety flag and bracket in front of the rear roller on the boat trailer. The flag provides constant visibility and can be stored when not in use.

Try grasshoppers or crickets for trout after dark. Cast the bug a short distance to the head of a pool and let it wiggle as it coasts on the surface.

On streams try fishing the water beneath trees. Fish know that insects drop from the limbs and leaves so they take up positions beneath them to feed.

A stream thermometer is a great help in determining where to fish. In September, colder water means fishing for bass deeper in pools, but trout can be taken closer to the surface.

Knots whipped into the line from casting weaken fragile leaders. Take the time to replace a knotted tippet with new material.

Try dry flies for panfish around brushy or rocky structure. Set the hook quickly. Panfish are fast at getting rid of the imitation.

A spinner can provide great action for bass when baited with a nightcrawler.

After putting on bug repellent, wash the palms of your hands before touching monofilament line. The repellent weakens the line and your chances of landing an exceptional fish.

Try trolling for northerns along good cover just off the shoreline with a minnow rigged three feet behind a bobber. The bobber keeps the minnow high and doubles as an attractor.

illustration by Rose Boegli



Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities.

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Coming UP in

Pennsylvania ANGILER

- October. If your winch knot has ever failed, you know it's a trauma. Check out the step-by-step photos in this issue on a safe, reliable winch knot.
- October. "Under Way at Night" is an enlightened view of how to maximize your nighttime boating safety.
- October. "Streams of Steel" spells out specific ways to score on Lake Erie steelies, in the lake and in the tribs.
- October. Crankbaits—most anglers have a tackle box full of them, but few fishermen know how to get them deep. An article in this issue reveals how to maximize your use of crankbaits.
- October. There's a guy in northeast Pennsylvania who catches one heck of a lot of muskies. In this issue's exclusive interview, he reveals his secrets of where and how he does it.
- Every issue. Look to all the regular features for firsthand information. "Straight Talk," "The Law and You," and all the lowdown in the "Anglers Currents" sections keep you well informed on fishing and boating in Pennsylvania.

SSSSSSNAKES in Basements and Buildings

Snakes in Basements and Buildings is the title of a one-page explanation of why snakes enter buildings, how to prevent their slipping into places where you don't want them, and what to do if you discover a snake in your home or cottage. For a free copy, contact: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. Please include a stamped, business-sized self-addressed envelope with requests.

New Boating Access

The Commission's Frankford Arsenal Access in Philadelphia opened to the public last May. The area features a 6-lane boating ramp and provides boaters and fishermen excellent access to the Delaware River. Parking facilities are available for 190 cars and boat trailers, and the access is open from 5 a.m. to 10 p.m. daily.

The property was conveyed to the Fish Commission by the federal government when the arsenal was

closed as a military facility. Funding for completion of the project came from the Federal Land and Water Conservation Funds matched with Fish Commission Fish Fund and Boat Fund money.

The Frankford Arsenal Access was formally dedicated last June.

Anglers Fined

York County Judge Joseph E. Erb recently handed down stiff fines for two Red Lion men convicted on charges related to using dynamite to catch fish. The two men were found guilty of disturbing waterways, criminal conspiracy, disorderly conduct, littering, and polluting waters.

One man was fined \$2,400 plus \$372 in court costs. He was also ordered to complete 80 hours of voluntary service in the preservation of state facilities in York County during 12 months probation. The other man was fined \$2,100 plus \$372 in court costs and was directed to serve 50 hours of voluntary service.

Waterways Conservation Officer Brian Burger apprehended the two men last June along Rambo Run in East Hopewell. Burger testified that the two men threw sticks of dynamite into the waterway to stun or kill fish.

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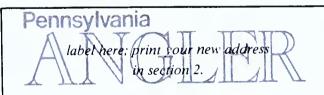
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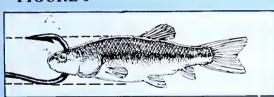
Trolling Live Bait for Muskies

by Mike Bleech

ive baiting for muskies, as traditionally practiced in the native musky range of northwest Pennsylvania, is a trolling method. It involves rowing at a slow to medium pace and trolling with a large live minnow or sucker suspended beneath a float. The system is not well-suited to use with a motor, which will be covered in detail later. It has been practiced less in many areas since the advent of scientific, mechanized angling.

Rest assured, however, that live bait trolling is being abandoned due to laziness—by no means due to any lack of effectiveness! It is still popular on waters where motor trolling is not

FIGURE 1



The hook must be larger than the minnow is thick.



Otherwise, the hook may be buried into the minnow.

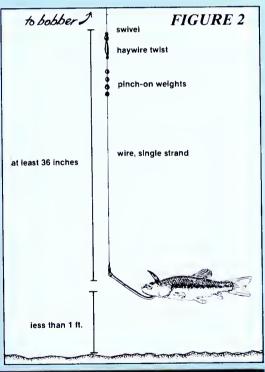
Even with the proper hook, this may occur occasionally when trying to sink a hook into a muskie.

permitted and among small groups of devotees.

Dave Peterson, my good friend and one of the best anglers I have ever crossed paths with, still practices live baiting as it was taught to him by his father, who had learned it from his father.

Mark the weed line

Live baiting in this manner was developed on natural lakes, where it is used primarily along weed lines. Years ago, live baiters would mark the weed line by driving poles into the bottom and suspending lanterns from the poles. This sport is practiced on both sides of sundown! I still hear stories





that muskies do not feed at night, but this idea may just be someone's way of saying he's afraid of the dark or of the bats, or some such thing. As I was taught and as I have observed, night is the time for live baiting.

A more current approach for marking the weed line uses portable buoys made from white plastic jugs. If you want to get fancy, you can place battery-powered lights inside the jugs, but the jugs alone are pretty easy to spot with a reasonably powerful headlamp. A few strips of orange or red reflector tape make the jugs stand out even more.

You can place temporary markers, but when you leave, you must retrieve the buoys. Leaving markers on the water while you are not fishing is illegal.

The jugs should be placed one every 25 yards to 50 yards along the weed line, depending on the shape of the weed line. Points in the weed line should be marked, as should any changes in direction. Bait presentation will not be accurate within inches, but the bait should be kept within a few feet of the weed line. The closer the better, without getting the bait hung in the weeds. Every weed-hung bait falls under suspicion as a hit, so it wastes time.

When to fish

Live baiting is usually thought of as a fall tactic. There is no reason why this tactic would not be good in any other season, with one big exception that Dave pointed out to me. It is downright dangerous to row quietly along in the darkness during tourist season! In its proper place, live baiting is a slow approach for cool to cold water. Though it will get the job done in warmer times, the summer months may be better spent with faster presentations and artificial lures.



Baits

The bait is usually a large sucker, but any other hardy bait can be used. It should be at least 6 inches in length, with an 8-inch sucker being standard. I have heard of live baiters using suckers as big as 16 inches! Most important is that the bait remain lively on the hook for as long as possible.

Baitfish can be netted legally up to 8 inches long. Using larger baitfish is legal, but fish so used over 8 inches long must be caught on hook and line.

Where this type of fishing is practiced, suckers are usually available in local tackle and bait shops. Be prepared to pay \$1.50 to a few dollars for each musky bait. You will understand why the price is high if you try to catch and keep your own.

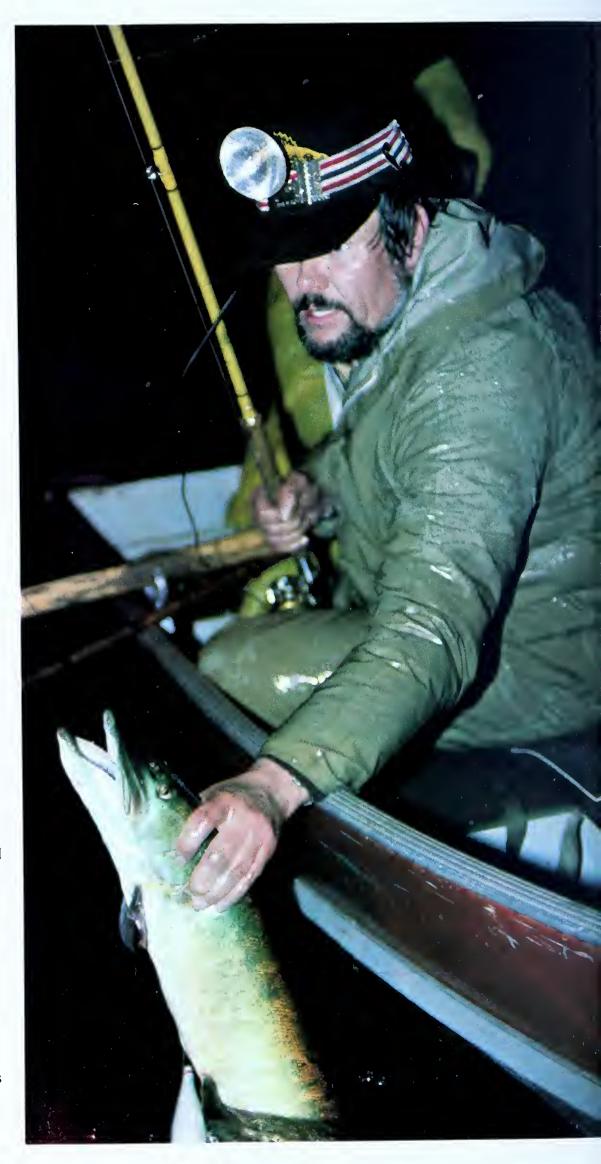
The bait is hooked through both lips, starting at the under-side. It is critical to have a hook with a gap larger than the diameter of the bait (while looking at the bait head-on). Otherwise, when you set the hook you will likely bury it into the bait rather than into the musky! Like many fish, muskies swallow other fish head-first. When the musky turns the bait to swallow it, the hook swivels so that the point aims toward the tail of the bait. (see Figure 1)

Expect to have trouble finding good hooks, so start looking now!

Hooks, rigs

The hook is attached to a wire leader about 36 inches in length. Most live baiters make their own, because that is often the only way to get them. If you are lucky, a local tackle shop will have some hooks rigged and for sale. Braided, coated wire and crimping sleeves are the most common material for these rigs, but I prefer a single-strand, uncoated wire. I tie on the hook and a swivel at the other end with a haywire twist. (see Figure 2)

Hook harnesses are popular in some areas. An argument in favor of harnesses is that the hook can be set almost immediately, making the chances of hook removal better. But Dave does not like the harness for a number of reasons. He figures that it injures the musky more than a single hook. Also, the harness may discourage takers, and it certainly gets hung in the weeds more often and picks up more junk.



Four or five pinch-on sinkers are attached to the leader near the swivel. Use as many as it takes to keep the bait down. The bait swings back as it is trolled, and the sinkers must counteract most of the swing. It may take somewhere in the neighborhood of an ounce or two of lead.

The float is positioned on the line so that if the bait were hung straight below it would be less than a foot off the bottom. Not all muskies are located at the base of the weed line, of course, but generations of experience have shown that this is the most productive set-up.

The float is a key piece of equipment! Its primary jobs are to keep the bait off the bottom and to signal strikes. It is critical that it slips through the water with as little resistance as possible, once a 'lunge grabs the bait. A torpedo-shaped balsa float, 10 to 12 inches long, is the best I have found. Unfortunately, the manufacturer of our local supply has gone out of business, but they are not hard to make.

Good floats can be fashioned from round balsa rod with coarse sandpaper in minutes. The tricky part is sealing and painting the floats. Balsa sealer is probably available wherever you find balsa. Try a hobby shop. The line cinches can be cut from soft plastic tubing. A friend with a small wood lathe can cut you a lifetime supply of these floats in just minutes!

The float is a visual tool, so it should be as visible as possible. A glossy white finish dressed up with a few strips of glow tape or prism tape is perfect. This combination shows up nicely underwater, which is a big help while trying to figure out when to set the hook, or while trying to follow a hooked musky through the weeds.

Line, reels, rods

Line is of no special concern with this job. My live bait rig is spooled with 50-pound dacron. Any good tough musky line will do.

Reels are another matter, because the need is so special. The reel must have a clicker! While the bait is trolled, the reel is left in free spool with the clicker on. The reel must be set so that normal trolling does not strip line from the reel, but any little extra pull, even the bait thrashing more than normal, will pull line from the reel. It is important that the musky does not feel anything unnatural when it takes the bait. A fine reel for this job is a Penn Levelmatic, which I use.

Live baiting rods are also specialized tools. Some of the rods used by oldtimers were 12-foot bamboo rods. The length serves two purposes; first, because the float is normally attached 8 or 9 feet up the line, the musky cannot be reeled closer than that same distance to the rod tip. This makes it very difficult to boat a musky with a shorter rod.

Second, the usual practice is to troll two baits. The long rods keep the baits separated. Five-foot rods would be plenty long if they could be positioned so that they stick straight out from the sides of the boat. But they cannot. The rods must be angled back to keep friction between line and guides to a minimum so that the musky does not feel anything unnatural.

Bait presentation

The actual presentation involves steady, though not fast, rowing. The baits are trailed about 15 feet to 50 feet behind the boat, depending on the complexity of the trolling pattern. When two baits are trolled, they are placed at different distances behind the boat.

The bait is always moving, covering a lot of water, and it is that jerking motion that muskies find so irresistible. Each stroke of the oars gives the bait a burst of speed. The bait is always in potential fish-holding water, except when the rig is occasionally raised to be cleared of weeds. It is inevitable that some weeds will be picked up, because live baiting is usually done near weed cover.

It is at this point—the rowing—that traditional live baiting loses much of its following, and the culprit is the electric motor. The reason is simple . . . it is much easier to use an electric motor than it is to row. Electric motor users point out that their motors cause less disturbance underwater than do oars. However true this may be, I am sure that the nature of the underwater noise may be at least as important as the volume, be it pitch, tone, or whatever. I appreciate tradition, so rowing just

seems to be the way to live bait for muskies.

If rowing is out of the question for you, then by all means use the electric motor if it is legal on your lake. It is a viable alternative, though a second choice.

Another case against the electric motor can be made as the musky grabs the bait. There is no set way for a musky to act after it grabs a bait. But one thing is for certain—the angler should stop the boat as soon as possible and get it moving in the direction of the musky. A competent oarsman can change direction almost instantly, while an electric motor cannot. It is easier to stay close to a musky with oars.

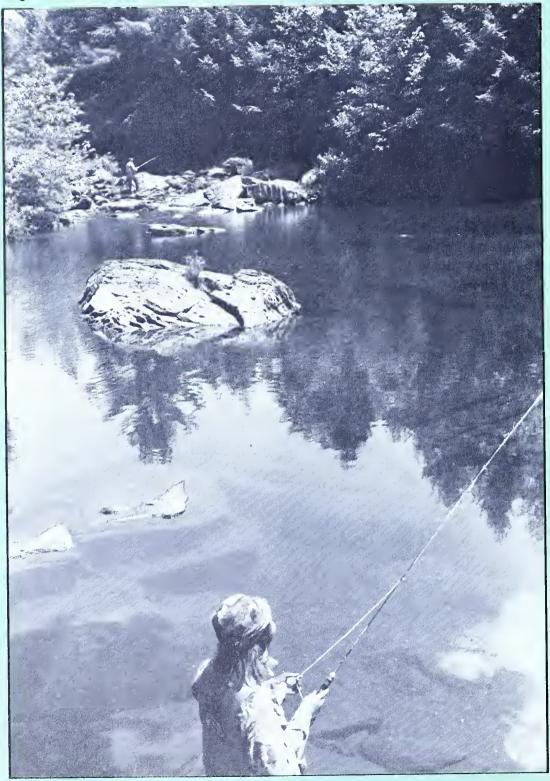
It is important to keep a short line between angler and musky for a couple of reasons. First is a point we have covered with other aspects of live baiting-to keep the musky from feeling anything unnatural! This is so important because all but the most aggressive muskies drop a bait at the first sign that anything is out of order. A long line surely gets wrapped around weeds, and the weight of a long line is enough to slow down a submarine! The second important reason for a short line is hook-setting efficiency. No musky angler need be reminded how hard it is to set a hook into this fish. Don't forget to sharpen vour hooks!

Figuring out just the exact instant to set the hook is a problem. If forced to give a formula, I would suggest setting the hook when the fish begins its second run. But this does not accurately portray the situation. There may be no second run. A musky may grab and swallow a bait in one motion. The first dozen muskies you catch while live baiting may all behave differently. In actual practice, experienced live baiters set the hook by intuition. This skill is something you have to learn on your own.

Prime time for live baiting will' come soon after the first frost. The most productive evenings will probably come just before a front or a storm, or even after a storm moves in. Calm, bright nights are usually not productive. Dave Paterson thinks that the best time to try for a trophy is on a windy, stormy, dark night. But then, what better time is there to go after a water wolf?

Better Fishing? Gimme a Break!

by Linda Steiner



Breaks offer gamefish cover and concealment from which they ambush prey. Breaks offer baitfish hiding places, too.

y friend Kathy sat at the water's edge, chin on palm, watching the minnows nibble her worm away. As the slowpoke of our fishing party, I had spent half an hour assembling my gear and had gotten to the streambank just in time to see her lay down her pole and take up a book.

"How are they biting, Kath?" I asked, though I didn't need to. Her luck was obvious.

"Nothing yet," she answered, smiling. Kathy was certainly brighter than I would have been.

"Is that where you've been fishing?" I asked, pointing to her baited hook. It hung limply in a foot-deep backwash, while the chubs played tag with it.

"Sure," she said, then, doubting, "Why? Isn't that a good spot? You said that creek was full of trout."

Yes, "this creek" was the famous Loyalsock and it's got plenty of fish, but I knew that to catch them an angler had to work at it. He, or she, must cast to the eddies behind boulders, prospect for pockets in the riffles, and plumb the heads and tails of the pools.

I looked up and down the stream for either of our husbands, but they were out of sight. It was obvious I'd gotten the job of breaking in this new fisherman, or rather, fisherwoman, by default. Like many beginners, Kathy had a lot of enthusiasm, but not much practical knowledge of fish or fishing. As she turned back to her book, I knew she'd be lost to the sport, and I'd lose a fishing partner, if I didn't help. I sat down on the rocks beside her and sighed.

Most novices know the rudiments of tackle, whether they're starting with baitcasting gear, fly rods, spinning tackle, or cane poles. They know how to cast because they've practiced at home. But in catching fish, the type of equipment used is secondary to knowing where to find fish.

Gazing across the Loyalsock, at its variety of fish-holding terrain, I solved the puzzle of stream fishing mentally, planning my casts. I wondered how I could explain to Kathy, or any new angler, that ability which a veteran

fisherman considers intuition: knowing the "fishy-looking" spots. It's the result of experience, of course, of catching or not catching on each cast, but how to give that knowledge instantly to a beginner? I knew I didn't want to burden my friend with a lot of hard-to-remember information about fish habits and habitat preferences. If I were going to help Kathy be a better angler, I needed a break.

Suddenly I realized that was it, what all the places I'd pick to cast to have in common: they are breaks. Perhaps Webster explains the idea of the break best in calling it "an interruption of regularity."

Hunters use the thought of the break in picking "gamey-looking" spots. The grouse hunter tightens his grip on the shotgun when he nears the edge of a thick stand of aspen. He knows this border between open and tangled woodland is the most likely spot for a flush. All wildlife, including fish, tends to associate itself with edges, or breaks, that mark a change in the prevailing physical terrain.

Any body of water, still or moving, is more than a featureless pothole or trough filled with liquid. There are many structures in a lake or stream that break up the monotony of water, and around these intrusions is where the fish will be found. Without knowing anything about a particular fish's requirements, without wading through the dynamics of river flow or limnology, with knowing only how to get a worm on a hook and that hook into the water, the angler has an above-average chance of catching a fish if he keeps the idea of the break in mind and casts when he finds one.

It's the theory of the break that counts in recognizing one, but let me give a few examples. Most breaks are hard and readily seen. Many are wood. Stumps, sunken logs, submerged brush, and even branches create changes in the watery landscape that draw fish.

Some breaks are rock, like boulders in a streambed, interrupting the water flow, or rock jumbles in a mudbottomed pond. Cliff edges plunge deep below the surface; the border of an island falls away; a flat or gently sloping bottom drops off sharply. All are breaks in the established water depth that mark great places to lower a bait or jig.



Breaks, changes in the physical terrain, are places where you'll find fish.

Other breaks are softer, their edges of greenery, like the borders of forests of underwater weeds or the open water in the midst of a mat of lily pads. Even small groupings or single weeds, in a sparsely vegetated lake, are enough of a break in a routine of unobstructed water to draw fish.

Some of the best breaks to fish are manmade, such as the concrete cliffs or bridge abutments or wooden spars and docks. The floating hulls of anchored boats are good obstacles around which to make a few casts. Along a line of submerged metal fenceposts in Shohola Lake, for instance, I had strike after strike from bass, as my canoe drifted the flooded field edge.

The most unusual breaks are on a large scale, so large they involve the movement of the water itself. A creek or river's straight flow is marked by the place it widens into pools or narrows into rapids, all changes in speed, depth and width. The head of the pool, where the stream breaks from fast to slow motion, is an excellent spot to cast, as well as the tail of the pool, where the water picks up speed again. There is another fishholding edge, the border between a quick current and still backwash, which is often the best break of all to fish.

In lakes or rivers, the entrance of a feeder stream marks an area of good

fishing. By knowing that the intruding flow, often colder, does not mix immediately but extends into the larger body of water, it's easy to cast to an unseen but fish-producing edge.

An alert angler on a sunny day will notice that there are additional breaks in the pattern of sunlit water. These are shadows that move as the sun moves, caused by both overhead objects and underwater structures. The comparative darkness of shade provides a change in the sun-drenched water. By casting to a sunken stump's shadow, for example, rather than the snag itself, a fisherman can get some unexpected bites.

There are solid, scientific reasons why all these breaks are good places to fish. They mean cover for concealment, or from which to dart out and seize prey, or they may attract baitfish and other food. They might be places of change in water temperature or oxygen content that the target fish prefer.

But for most beginning fishermen, and a lot of us longtime anglers, thinking about each cast technically is too much bother. For us, fishing should be good, but simple. I couldn't say I made an expert angler out of Kathy, but at least she now sees some sense in where she throws her hook and her catching is definitely better. All she needed, as I told her, was a break.

Est Brown Eront: by Larry Shaffer

n 1883 Germany it was called the bachforelle, in Italy, the trota, and in France, la truite. It was, and still is, the common brook trout of Europe where it lived in many large rivers, notably the Rhine and the upper Thames. It was known as the brown trout in England to distinguish it from the bull trout. Soon it would be known in the United States as the brown trout or von Behr trout, in honor of Baron von Behr who was, until his death in 1887, president of the German Fishery Association and who was very active in the acclimation of the fish in America.

Although a few brown trout eggs were received in Pennsylvania as early as 1883, it was not until 1886 that a shipment officially was consigned here and kept here. Thus, this year marks the hundredth anniversary of the introduction of the brown trout into Pennsylvania's hatchery system and ultimately its streams. Fish Commission hatcheries this month are in the midst of their busy spawning activity, an annual autumn event, so it is appropriate that we look back 100 years to when and how this favorite of many trout anglers first came to Pennsylvania.

In the "Report of the State Commissioners of Fisheries for the Years 1885 and 1886," John Gay, of Greensburg, who was then president of the Commissioners, wrote to "His Excellency James A. Beaver, Governor of the Commonwealth of Pennsylvania: Through the kindness of Prof. Spencer F. Baird, U.S. Fish Commissioner, we have received 10,000 German trout eggs direct from Germany."

En route from Germany, the eggs were repacked at New York state's Cold Spring Harbor Hatchery and then delivered to Pennsylvania's Western Hatchery at Corry, Erie County (the Commission's oldest hatchery still in use). When unpacked by fish culturists at the western facility, a mere 65 dead eggs were found, a feat perhaps unrivaled even today. The surviving eggs were later to

be carefully hatched, the fish kept for breeders.

Introduction of the brown trout into Pennsylvania, and in fact to the United States, actually began several years earlier. While in Germany in 1880, as a staff member of the American commissioners attending the International Fisheries Exhibition, Gay had an opportunity to fish for and catch his first brown trout. He was "so struck with their vigor and game qualities that I resolved to introduce them into America at the very first opportunity, and so expressed myself to my friend, Herr von Behr, president of the German Fisheries Association."

In 1883, Gay reported receiving as a personal present from his friend, von Behr, a small lot of brown trout eggs, "some of which I kept and some were distributed." This annual gift of eggs went on for several years, with most of the eggs distributed to a New York state hatchery on Caledonia Creek where they hatched. The new fish were kept for breeders.

At the time, Pennsylvania simply did not have hatchery pond space available for this new species. But in spite of the lack of space, Gay was able to raise a few brownies and quickly observed that they were "a quicker growing and gamier fish than our own native trout, the S. fontinalis (brook trout), but I do not think they are quite as handsome."

By the time the 10,000 eggs were received in 1886 at the Corry station, Pennsylvania had constructed sufficient ponds and troughs so that it could effectively deal with this newly imported species. That trout eggs could be delivered all the way from Europe was one thing. That only 65 out of 10,000 would be lost between Cold Spring Harbor and Corry is another, especially when portable pumps and cooling systems had yet to come along.

But by now, brown trout eggs were being shipped from Germany on a regular basis. Arriving at New York on steamers, as many as 80,000 eggs at a time made the 10-day to 12-day crossing of the Atlantic. The survival rate between Germany and New York could not be expected to be as great as the shorter distances between states, however. In fact, many times large numbers of eggs arrived so mature that they had already hatched and died, while others simply dried out. In spite of seemingly insurmountable odds, propagation of the brown trout in this country continued to make progress, and it wasn't long before the first brown trout were planted in Pennsylvania waters.

By June 1, 1888, 700 year-old brown trout were reported at Corry ready to be stocked, and it was just 27 days later that 135 of those fish were consigned to a Harry Peators, who met the Fish Commission's railroad car at Bushkill, Pennsylvania. Thus, Pike County was to receive the first planting of the brown trout in Pennsylvania. Other stockings followed until five different waters in Pike and Monroe counties had received their first brown trout.

During that same year, some 1.7 million brook trout fry and 420,000 rainbow trout fry along with 1,325 two-year-old rainbows had been raised for "the re-stocking of depopulated streams." A year later, in August of 1889, 30,000 brown trout fry were planted in Westmoreland, Pike, Wayne, and Dauphin counties. By 1891, brown trout were well established in New York, Pennsylvania, Maryland, Missouri, Michigan, Wisconsin, Nebraska, Colorado, and several other states.

In 1892, nearly 124,000 brown tro were stocked in 15 Pennsylvania counties, and in just two years that grew to almost 400,000 brownies planted in 27 counties, most of them carried in "milk cans" on a Commission-owned railroad car especially built for the purpose. In most cases, these trout were stocked during the fry stage, shipped when just over three months old. Carried in cans to which ice was added to keep the

Immigrant from the Old World

water cool, instructions to those responsible for caring for these young fish also included the need to add air "by dipping the water from the can and letting it fall into the can from some height, so as to force air into the water," a crude, but apparently effective means of adding life-giving oxygen to the water.

By the early 1890s, sufficient brown trout stock had been gathered at the western station in Corry so that the Commission fish culturists could transfer several brood fish to the new eastern station built in Allentown. In 1894, 18,000 brown trout were shipped from this facility destined for waters in five counties.

After several years of swimming in Pennsylvania waters, the brown trout had evoked mixed emotions from those anglers who regularly fished for trout in those early days. William Meehan, who was an associate editor for the *Philadelphia Public Ledger*, wrote about it in "Fish, Fishing and Fisheries of Pennsylvania," a booklet distributed by the Fish Commission at its exhibit at the Columbian Exposition, the 1894 World's Fair in Chicago: "The alien has made itself

perfectly at home and has drawn to it a multitude of angling friends and raised up a host of enemies among those who believe that there is no fish the equal of the American brook trout, and who are fully convinced that the introduction of the foreigner will work injury to their favorite."

As proof of its tendency to do dastardly deeds, opponents of the brown trout noted the "marvelous rapidity with which it grows . . . its well-known voracity . . . its reputed strong cannibalistic tendencies . . . and the belief that it has a unique fondness for spawn." But perhaps the final insult was leveled in the observation that "where there is plenty of good, pure, cold water and abundance of food, brown trout grow with almost the marvelous rapidity of the German carp."

Actually, the brown trout did not haphazardly traipse into the haunts of the brook trout. Rather, preferring somewhat warmer water, he very conveniently filled that void somewhere between the brook trout's favorite cooler headwater sections and the warmer waters preferred by the black bass, which by now occupied

the lower reaches of many streams. In addition, the brown trout often was able to inhabit that section of stream now warmed following the intense lumbering operations of the period.

Concerning its great game qualities, there is no question that Izaak Walton alone would have made the fish famous, but for more than 1,000 years, Englishmen and others have justly sung its praises. Ansonius, a writer in the early part of the fifth century, wrote strongly on the beauty of the fish, and Dame Juliance Berners, authoress of "The Treatyse of Fysshynge," which was written in 1496, speaks in no uncertain language of her fondness for the brown trout.

Today, almost all the angling literature written in this country as well as abroad is directed toward the brown trout. Trout anglers themselves often forget, or don't even realize, that the brown trout is not a native species, that this most wary of all trout first came to the Keystone State from a long way off thanks to those early, innovative fish culturists who had the foresight, ambition and perseverance to make it happen — 100 years ago.







Straight Talk

RUNNING OUT OF TIME



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

The 99th Congress and the Pennsylvania General Assembly are running out of time! Congress has only a few months left to mitigate differences and pass pending bills. Our General Assembly has only five days in September, eight days in October, and five days in November (after the election) to accomplish the same thing.

On the federal scene, Superfund, the Endangered Species Act, the Clean Water Act, and many other environmental bills are very close to becoming law. HR 4567—providing acid rain controls—has tremendous support. But if the Congress doesn't approve these bills by the end of the year, we will have to start all over again next year. We look forward to the Emergency Wetlands Resources Act (a bill to provide money to buy wetlands), and two international bills on biological diversity and tropical deforestation are through the House, awaiting action by the Senate Foreign Relations Committee.

The list seems endless. Some under-the-table maneuvering with the Highway Beautification Act tends to perpetuate the proliferation of the billboard blight on our landscapes. HR 44, which makes major improvements in the process used by FERC to license dams, spurs more applicants for hundreds of small hydroelectric projects but corrects the present procedures that have approved scores of such projects without listening to the recommendations of both state and federal fish and wildlife agencies. The fight to cut the U.S. Forest Service budget requests, to permit spending hundreds of millions of dollars each year to build destructive roads into our national forests, now shifts to the Senate floor. New efforts to reform the Federal Insecticide, Fungicide and Rodenticide Act are drastically needed.

In the Pennsylvania General Assembly, we hope to see the current Bottle Bill legislation, best expressed in HB 479, brought out for a vote. This and two other bills this year are the result of over 14 years of efforts by conservation groups and the organized farmers to imitate what 11 other states have successfully accomplished in making it unprofitable to throw bottles and cans out of the windows of cars. The lobbyists for the container and beverage industries have claimed that their industries are doing a great job encouraging people to stop littering. But just look at the roadsides and stream bottoms, one bottle-full of time away from the point of purchase, and you'll see how well they have done their job. The farmers have proof, confirmed by veterinarians, that these ground-up containers in their hay are deleterious to the health of livestock. Yet the lobbyists say that there is no evidence that this happens. How can they face themselves in a mirror, let alone pose as good citizens?

The solution to all the above delays is to contact your elected legislator or congressman. If you don't know how, call us, and we'll give you a phone number or an address. But don't wait. The 100th Congress that will come in January 1987, as well as the newly elected General Assembly in Pennsylvania, will have many new faces, and starting from scratch on these desired bills is a terrible waste of time, during which these needed reforms could have been in place.

This reminds us of the story of the little boy who heard the broken family clock strike eleven, twelve, thirteen, fourteen, and fifteen—he ran to his parents and shook them, shouting, "Wake up! It's later than it's ever been."

Falk W. Phele

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Pennsylvania The Keystone State's Official Fishing Magazine

Good Sportsmanship Mends Fences by Wendy Plowman Fishing on private property—that's the subject this landowner Crankin' Way Down by Mike Bleech How low can you go? Down enough to up your angling Secrets of a Musky King by Gerry Kingdom Bob Drake has caught over 200 muskies in the last few years. Structure: The Secret to Catching Lake Largemouth Bass by C. Boyd Pfeiffer This detailed information is a must for bass fishermen. 12 Under Way at Night by Joe Greene Using navigation lights properly and interpreting their The Flashabou Matuka by Chauncy K. Lively American fly fishermen seem ready to pick up new ideas at the drop of a fishing hat. The Matuka is one of those unusual Streams of Steel by Chuck Beckman The author irons out all the obstacles to your tangling Pennsylvania's Steelheads: Where, When, and How Anglers Catch Them by Art Michaels These specifics, along with the article on the preceding pages, County Features—Columbia and Montour Counties by John W. Weaver, and Tioga County A Strong, Reliable Winch Knot by Art Michaels Anglers Notebook31

The cover

This issue's cover shows a Lake Erie coho salmon, photographed by Joe Workosky. Anglers challenged by Lake Erie salmon and trout will want to look over the article that begins on page 22, and anyone who wants to land a citation-sized steelhead won't want to miss the information spelled out on page 25. There's practical information for bass fishermen on page 12, and boaters will want to check out the articles on pages 16 and 32 (back cover).

Sportsmanship Mends Fences



by Wendy Plowman

years ago, our old house along the Yellow Breeches Creek in Cumberland County is complete with an old dam, ancient oaks, and sycamore trees that create a picturebook setting any time of the year. The fishing has always been

Members of the Yellow Breeches Anglers & Conservation Association inspect the mountain of trash they collected during the group's annual cleanup along the Yellow Breeches.

good around here, too—and not just in the "good old days" either.

The state record rainbow trout (an 11.33 pounder) was creeled by Phil Grosklos of York above the dam just

last October. In December he was back again—in our fishing hole. This time he caught a sleek 23-inch brownie out of there, and right from under my nose. I managed a recalcitrant congratulations and decided to take his picture anyway . . . and ponder the consequences of public access.

Lots of other sizable fish and critters provide outdoor pursuits up and down this stretch of the creek. One fellow regularly fishes for snapping turtles all night, and hauls in some real dandies. We're happy he's stabilizing the turtle population explosion, because they're infamous for gulping down wood duck and mallard ducklings as fast as they are hatched. One day, he stopped by the house with a quart of homemade snapper soup for us to sample. It was different, but I must admit, I'll have to work at acquiring a taste for it considering the reputation and diet of the raw material.

Walking up and down the creek and talking to fishermen is a favorite pastime, and we meet all types and temperaments. One elderly gentleman hauls away the trash he finds by stashing it in the trunk of his car. He always makes sure I see what he's collected, and I always let him know how much we appreciate his sportsmanlike efforts.

These are the good memories and are part of what makes living here so special.

On the other hand, looking at the scene from a distance, you'd never guess what kind of problems we encounter. Creekside trash cans are set out for the public's convenience and we pay to have the refuse hauled away. Most people find the cans and use them. Some still can't figure out why we set them there, and some load them up with their household trash. Some fishermen are too lazy-or ignorant-to walk around the perimeter of the property to gain access to the creek, but instead will walk right past our house and through our yard.

These instances are the exception, not the rule. Most sportsmen use common sense and respect our wishes, and are welcomed.

My love affair with the "Breeches,"

as it's called, goes back to my childhood. I fished it with my dad, interrupting one such trip with an unplanned early spring dip in its icy water. You could find us on hot summer days cooling off in its deep pools. Poison ivy and stinging nettles, which grow profusely on its banks, can cause suffering from early spring until frost, and the water's distinct musty odor never changes. Maybe all those trout cause this effect!

When we decided to buy here in 1983, I thought we were prepared for what a setting like this had to dish out. The occasional and predictable creek rises are a nuisance but settle down in a day or so. In those rare instances, the creek becomes scary. The raging water gouges away huge sections of embankment, spreading the muck over the grass and garden. Then there's the basement which houses our furnace and the unnerving feeling that overcomes us when we look down there and all we see is water. These are the things we know might happen but hope they don't.

We also expected lots of fishermen. This section of the creek has been a fishing hotspot for decades. My great-grandfather taught my dad how to fish here when he was a child. According to my 80-year-old aunt, they'd ride horseback from Mt. Holly Springs and spend the day fishing around Brandtsville and the dam.

My dad and I fished by the dam several times years ago, but we had another favorite hole downstream that we liked even better. It was all private land, yet open to public fishing.

Years later, while fishing with a friend, I found to my surprise that a new owner closed that section which produced so many fat trout. When I spotted the "posted" signs I chose to ignore them. I had fished here for thirty years, and felt a certain amount of proprietary interest in this stretch of water. Surely my "years-of-service" meant something. As I slipped under the fence, I didn't realize it but the new landowner was approaching from our rear. He crudely hollered, "Can't you read? Where do you think you're going?"

I replied in a flip tone of voice, "I'm going fishing!"—(whether you like it or not)—was the intended message.

My fishing partner diplomatically interceded in our eyeball-to-eyeball confrontation, firmly suggesting that I get back into the truck. My friend listened patiently to the new owner's diatribe. He complained of major littering, fire building and fence cutting, none of which I had committed by association or otherwise. As I sat there, frustrated and angry, I vowed to myself that if ever I were fortunate enough to own property next to a creek, it would never be closed to fishing. This owner was being grossly unfair in my opinion. To this day, that beautiful section of the Yellow Breeches remains closed—all because of public misuse and disrespect.

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Not long after we moved to our own place along the Breeches we decided to pick up trash along the mile-long stretch of township road that parallels the stream. Our tract is long and narrow, most of it not more than 5 acres wide, so there's considerable creek frontage. It took us two weekends and 32 trash bags to complete the long-overdue backbreaking task. The logic was that if we picked up all the existing trash and kept the area spruced up, people would be less likely to litter. This rationale proved to be true—to a point. Later, we had the trash cans installed along the creek. The Yellow Breeches Angler's Association provided the cans, if we agreed to have them serviced as a convenience to the fishermen.

Many would argue that fishermen are not the guilty culprits of streamside litter, but I must disagree. Who else would leave empty corn cans, foam throw-away bait containers, discarded boots, and lure and hook wrappers? How about masses of tangled line from trees, which birds try to use for building nests but get tangled in it and sometimes hang themselves instead?

That first winter and spring went without any major incident. Then one summer afternoon, my family sat down to enjoy a picnic lunch at tables set up near the creek's edge in our front yard. Two anglers fishing less than 30 feet from our gathering didn't present a problem until one of them caught a fish and started yelling. In

his excitement he added a few curse words just for color. I walked over and quietly asked them to move upstream because they were disturbing our meal. One of them rudely protested, "Who do you think you are? You can't chase us out. You don't own the creek!" Whether it was for spite or just for privacy, we posted a small area of the creek next to the house for the remainder of that summer. Already I broke a promise I had made to myself many years before.

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Then I started to think about what happened. Hadn't I reacted the same way as the landowner several years before when he asked me to leave? A sportsman's unpardonable sin is to allow rash emotion to rule thinking. Even though the circumstances were different, I also had lost control and reacted rudely toward the landowner.

I love to fish and try new holes, not only on the Yellow Breeches but wherever there are fish to present new challenges. As we all know, more often than ever before, we're greeted with posted signs on stretches that had previously been open to fishing. I'm beginning to find out firsthand just why that happens. It's unfortunate for all of us. I'm concerned that the future of fishing and hunting on private lands looks rather bleak, unless sportsmen become responsible not only for their own actions but for those around them. We must not only check ourselves but stop those who disregard the laws or the owner's wishes and speak up to them.

The sun rises and sets here on the Breeches like anywhere else on earth, but the water makes the difference. It intensifies the grandeur in many ways. The sunsets are exquisite, the fishing magnificent, it's thick with waterfowl and songbirds—just a great place to live and share with others who want to obey the rules and act like responsible sportsmen. It's up to each one of us to help keep private lands open for everyone's enjoyment now and in the future.

Freelance writer-photographer Wendy Plowman edits POW-WOW, the newsletter of the Pennsylvania Outdoor Writers Association.

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Crankin' Way Down

■he scene was Lake Erie on a balmy October morning. A fishing partner and I were drifting over a large hump that rose within 12 feet of the surface. We were casting chartreuse crankbaits, and one of us was having a great deal of success. I am not too humble to mention that I was the fortunate one that day. My catch included an impressive number of smallmouths in the four-pound class, while my partner had caught only two small bass.

We had wagered cooking lunch and clean-up on the catch, plus my partner had gotten a bit cocky. Otherwise, I would have told him what was going on. We were using the same type of lure. In fact, at one point we swapped lures. Even that did not help. I did not let my partner see me apply the pliers to the crankbait he had been using, nor did I tell him why the already tuned lure of mine he switched to would not get the job done for him.

The lesson would drive the point home better than any explanation I could give. Nothing like a sound whipping for fast learning! Or maybe I just have a mean streak. At any rate, we did straighten the matter out during lunch. It may have been justice that he took the lunker of the day just before supper.

What was the cause of the difference in our catches during the morning? We were not fishing the same water, even though we were casting the same lure into the same place!

How could we be casting to the same place and yet be fishing different water? My crankbaits were bumping bottom in the 12-foot depths, while my partner's lure probably got no deeper than six or seven feet. The difference was due to my light line (8pound-test compared to his 17-poundtest), my longer casts, and the way I held my rod.

Tuning

The first step for achieving maximum depth from almost any crankbait is tuning the lure. (Some lures are tuned by the manufacturer.) Many lures are packaged with tuning instructions, which should be followed. If instructions are not included, the normal methods of tuning are: turning the line eye if it is a screw-type; bending the line eye; or shaving the lip. Remember that tuning may damage the lure, however, and this circumstance is the tuner's responsibility.

Lures tuned for maximum diving ability should run straight at the maximum speed at which the lure will be used. The easiest way to check this characteristic is to troll. The lure should be at least 10 feet beyond the rod tip during the check. To check from shore, find water that is without current and is deeper than the lure will run. Make a cast and retrieve fast, with the rod tip pointed straight at the lure. The lure should run straight toward the rod tip.

Gear

The next step is to equip yourself with deep-cranking gear. Granted, this step is only for the most serious anglers, because of the added expense. But every little bit helps, so do what vou can.

Deep-cranking gear is fine-diameter line, a long, stiff rod, and a high-speed retrieve reel that will make long casts.

The reason for the small-diameter line may not be apparent. All normal casting lines pull crankbaits toward the surface, while the diving lip causes the lures to dive. The larger the line, the more it drags the lure toward the surface. Trollers use lead-core line or wire line to help overcome this problem, but this is not a practical alternative for casters. The only significant alternative is line diameter. It follows that the smart cranker pays

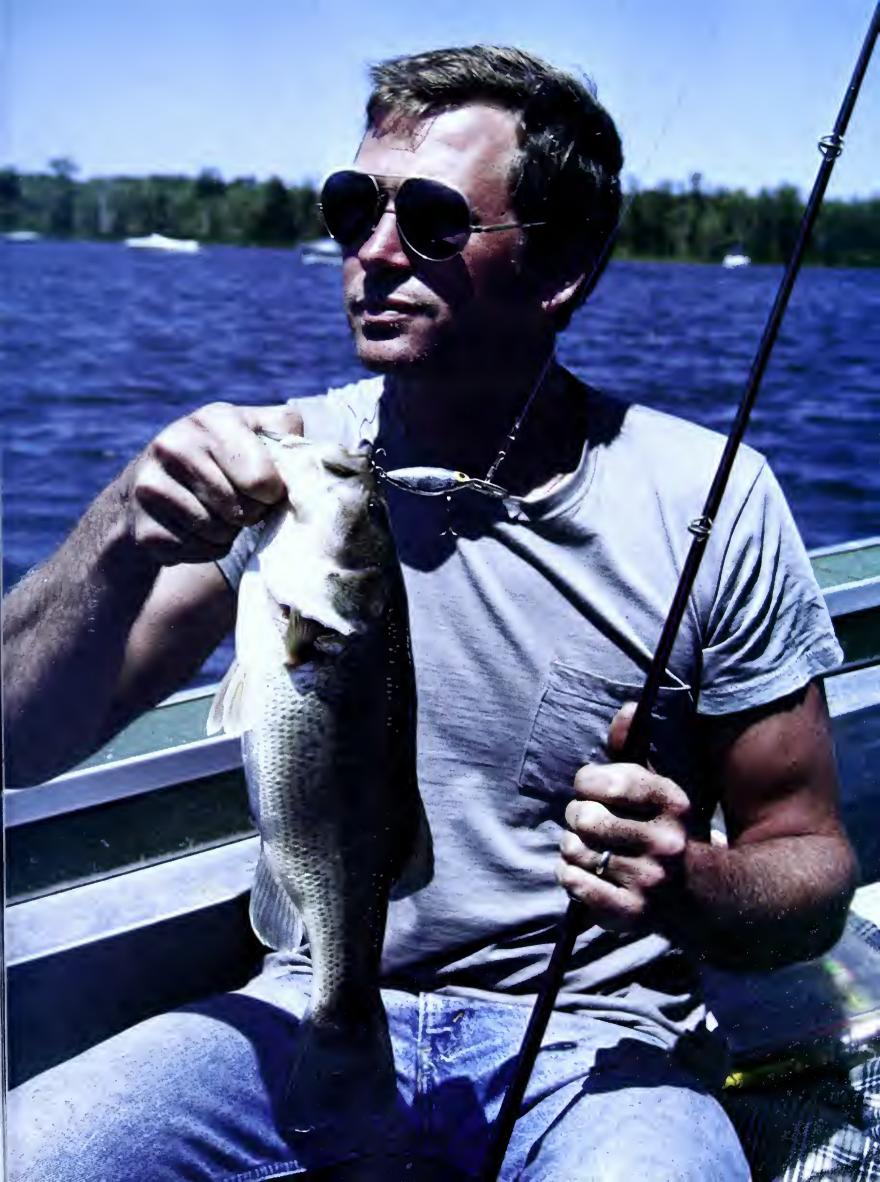
strict attention to a line's strength-todiameter ratio.

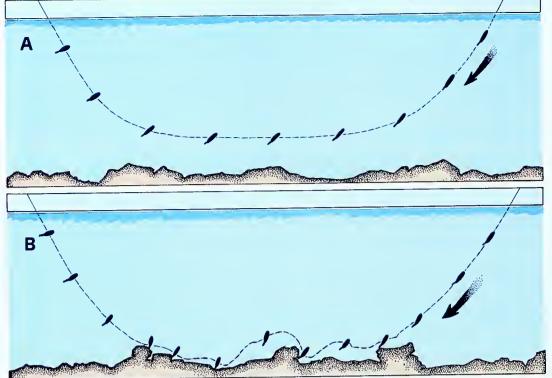
Some crankbaits must be retrieved fast to reach maximum depth, thus the need for the fast retrieve reel. The disadvantage to the fast reel is that it takes control and constant attention to keep the retrieve slow, when called for.

Crankbaits travel in a sort of stretched-out U-shape during the retrieve (see figure 1). When the retrieve begins, the crankbait begins diving, assuming that it is a floaterdiver. It continues to dive until it reaches a certain maximum depth, and then it continues at about that same depth until the rod tip forces it back up to the surface. If the cast is not long enough, the lure never reaches its maximum potential depth before coming back to the surface. Long rods like the 7-foot cranking rods now available, or even longer flipping rods, make much longer casts than conventional 5-foot or 51/2-foot casting rods . . . if the caster has the casting skill!

Jack Bell, one of our state's most prominent anglers, earned part of his reputation on Raystown Lake and Allegheny Reservoir by cranking with his "git-em-out-there" rod. This rod was nothing more than his flipping rod. But there is more to Jack's long rod than casting. During the retrieve, Jack sticks that long, beefy rod straight down into the water. This move lowers the point from which the lure is being pulled by about 10 feet, and extends the crankbait's maximum depth by as much as four or five feet with some lures!

Retrieving a crankbait in this manner is certainly more awkward than retrieving in the normal manner. Hook setting is quite difficult. A stiff rod is an advantage in this regard, as is a small-diameter rod. The most important factor, though, is sharp hooks!





Example A shows the path taken by most crankbaits. Anglers hate to get those crankbaits down where they can get hung up! Example B shows a more productive path for crankbaits, digging into the bottom and bouncing off rocks or other bottom objects. Many experts think that the bouncing is the most effective part of a retrieve.

Honed hooks

The usual reason for cranking to maximum depth is to reach the bottom. Something about the action of a crankbait digging along the bottom, bouncing off obstructions, turns game fish on. But this action is hard on hooks and line. Put the file to the hooks and break off a few feet of line and retie every time you think of it. This sometimes makes the difference between a good day and a bad day!

Think back to a fishing outing when you caught no fish and had two or three hits. There have probably been many such outings.

Furthermore, you have probably had fishless days when you missed more than three hits. If you hooked up on just half of those missed hits, you would probably rate yourself as an expert! There are plenty of anglers considered to be experts whose only advantage over the average angler is sharp hooks.

Time to review. Simply casting and retrieving crankbaits is easy, but getting crankbaits down to maximum depth is a precise science that requires more physical effort. Use the following guidelines for deep cranking.



- Tune the crankbait so that it runs straight during the fastest retrieve you will use.
- Use small-diameter line.
- Make long casts.
- Keep the rod tip low—preferably underwater during the retrieve.

Lures

The one big factor of deep cranking we have yet to examine is the crankbait itself, which is the ultimate limiting factor. It is no secret that various crankbaits dive to different depths. But which dive deepest?

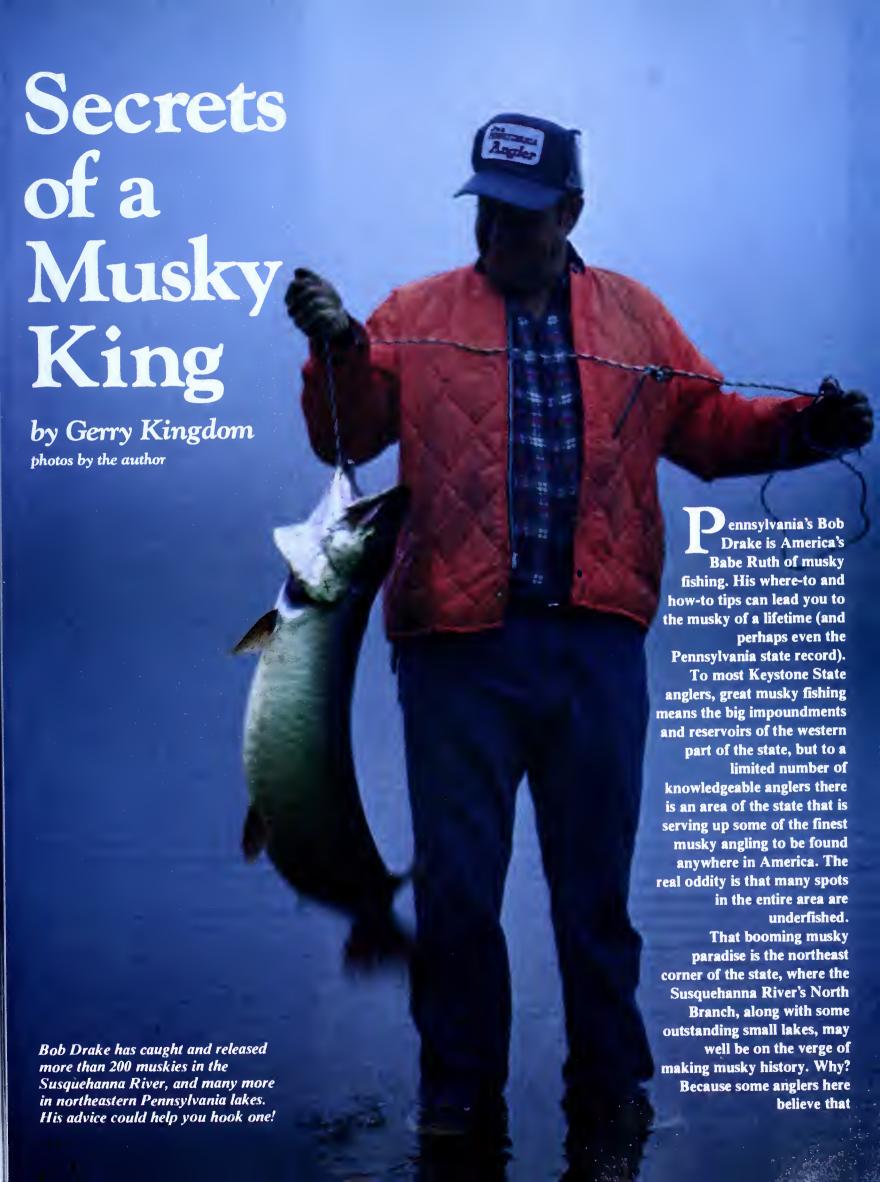
Generally, those lures with large lips that are in line with the front-to-rear axis of the lure dive deepest. Large crankbaits generally dive deeper than small crankbaits. Crankbaits designed for fast retrieves usually dive deeper than those designed for slow retrieves. Most of the deepest diving crankbaits are so labeled on the packaging by the manufacturer.

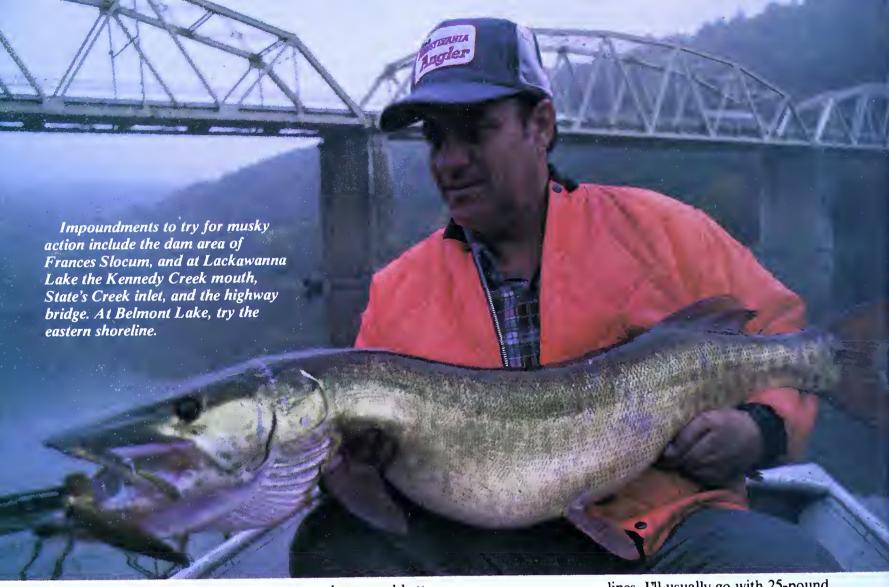
These deep cranking methods apply to all crankbaits, not just the extradeep divers. A floating minnow lure that normally dives only two feet, for example, can be worked down to six or seven feet. Try this for early season trout fishing on lakes or large creeks, and later on for smallmouths.

Tripling a crankbait's maximum depth is an extreme example of the effectiveness of deep cranking. As a lure's maximum dive increases, the potential improvement percentage decreases. Sticking the rod underwater during the retrieve is the most significant of the deep-cranking guidelines, but it is limited by the length of the rod. The effectiveness of this maneuver actually decreases with the deeper-diving lures.

I hesitate to mention how deep it is possible to crank with these methods, because some anglers would certainly take it as a challenge. Let us say that the limits have not been reached. My best efforts have gotten lures down slightly deeper than 20 feet, using standard bass casting tackle and a bass-size crankbait. With musky lures and 10-pound-test line I have gone even deeper.

Deep cranking is not a method that is called for every day. It is merely another addition to your bag of tricks. Because fishing is challenging and always changing, it pays to be a tricky angler!





within the next year or two the current state record will be topped by a musky caught in this region.

One of those fishermen is superangler Bob Drake of Scranton. To learn more about this up-and-coming musky fishing region, I spoke with Drake recently. His forecast was exciting, and his tips were informative and simple.

Kingdom: Bob, if you'd be good enough to put modesty aside for a moment, I'd like to ask you about your own successes with muskies in northeastern Pennsylvania.

Drake: Well, I've really been hitting into them over the past few years. I've taken at least 200 muskies out of the Susquehanna, and I couldn't tell you how many I've caught at some of the smaller lakes. But, modesty or no modesty, much of it has to do with the fact that they're in there, and I mean they're really in there.

K: Specifically?

D: In the fall, I've been averaging almost a musky a day. Two years ago I took 12 muskies in 14 days during autumn, and last year, I caught 16 muskies in 4 days. That's a lot of muskies. But each year it seems to get

better and better.

K: What was your biggest?

D: A fish of 47 inches, 30 pounds. But I've missed several recently that were well over 60 inches. They were definitely state record fish. Three of those were in the North Branch and one was at the Lackawanna State Park near Wallsville.

K: Okay, let's get right to the point. Where are the *best* musky spots right now?

D: The North Branch is teeming with muskies, and I mean teeming. You can cast your lure anywhere along the river from Berwick clear up to the state's northern border, and you'll catch 'em. Other good spots are Belmont Lake, Frances Slocum State Park, and, of course, the Lackawanna State Park Lake. They've all got 50-inch-plus muskies in them.

K: We'll get back to these in just a minute, Bob, but for now, how about starting us out with some advice on preliminaries, such as tackle and the like.

D: My own preference in rods is Shakespeare's 7-foot Ugly Stick, which I match with a Garcia Cardinal Heavy Duty spinning reel because it's got the best drag I've ever seen. As for lines, I'll usually go with 25-pound test, because the bigger fish hit aggressively and fight very hard. Also because the water is slightly on the murky side in the river, where I do most of my fishing.

K: And lures?

D: The top three are the Swim Whizz, Rebels, and Bombers. Rapalas and Cisco Kids are also excellent. I have a secret method when it comes to preparing lures, though, and I think this has a lot to do with my success.

K: Mind sharing it?

D: Yes, I do.

K: We're begging.

D: Okay, I'm a sucker for beggars. The best tip you'll ever get for muskies is this one: Buy a seven-inch Rebel floater, cut it in half, and joint it. Use it in either black/gold, which is what it comes in, or paint it blaze orange or chartreuse. I can only describe it in one way: deadly. Another good suggestion is to attach bright fly tying tinsel right to the lure. Put it on as you would on a jig, then glue it and string it. Be sure to use the same color as the lure.

K: And in live baits?

D: In still waters, I'll go with 6-inch shiners, and I'll fish these under a

etration - Tad Walke

bobber. The best method is to liphook the shiner and then drift it slowly in and out of shoreline structure.

K: Which brings us to another point. What structures do you look for, especially for the biggest muskies?

D: In any waterway, muskies almost always need a place to attack from. You will catch them on the prowl, but more often it's near a place where they've taken up hiding. In the river I look for the following: island tips (downriver), backwater eddies, large rocks (again, downriver), dropoffs, undercut banks, and fallen tree stumps. In lakes I look for inlets, stumps, and weedbeds in summer and fall.

As for fishing these structures, I usually go over them anywhere from three to six times. Muskies will not always hit on the first pass.

K: How deep?

D: Always 3 to 8 feet.

K: Any particular tips for fall anglers?

D: Absolutely. The drastic temperature drop makes muskies put on the feed bag at this time of year. As soon as you get the first cold spell right up until winter, musky fishing becomes fantastic. It's the time of the year to go for them. Incidentally, my own experience has shown that the biggest muskies are caught on the days before and after a full moon. Don't ask my why.

Another thing that fall anglers should know is that you've got to speed up the lure during this time of year. The metabolism change in the muskies leads to fiercer, faster hits, and far more vicious fighting.

K: Great, now how about some specifics on where to fish the river and the lakes we've mentioned.

D: You bet. But first I'd like to mention something about the Fish Commission's role in all this musky fishing business, even though you said you'd rather not talk about it in a Fish Commission publication.

K: It always sounds a bit patronizing.

D: Regardless. A dozen or so years ago I helped some of the Fish Commission guys stock the Susquehanna with musky fingerlings, and I can remember everybody griping about the Commission wasting its time doing it. Well, I'll tell you, those same guys who were doing

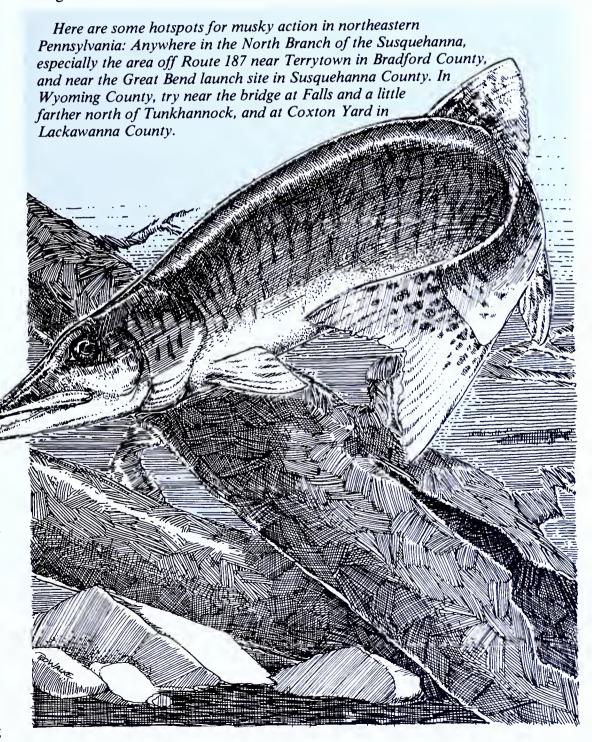
the complaining ought to be out here now to see this fishing. There can't be a better place anywhere than the North Branch. The Fish Commission did an outstanding job.

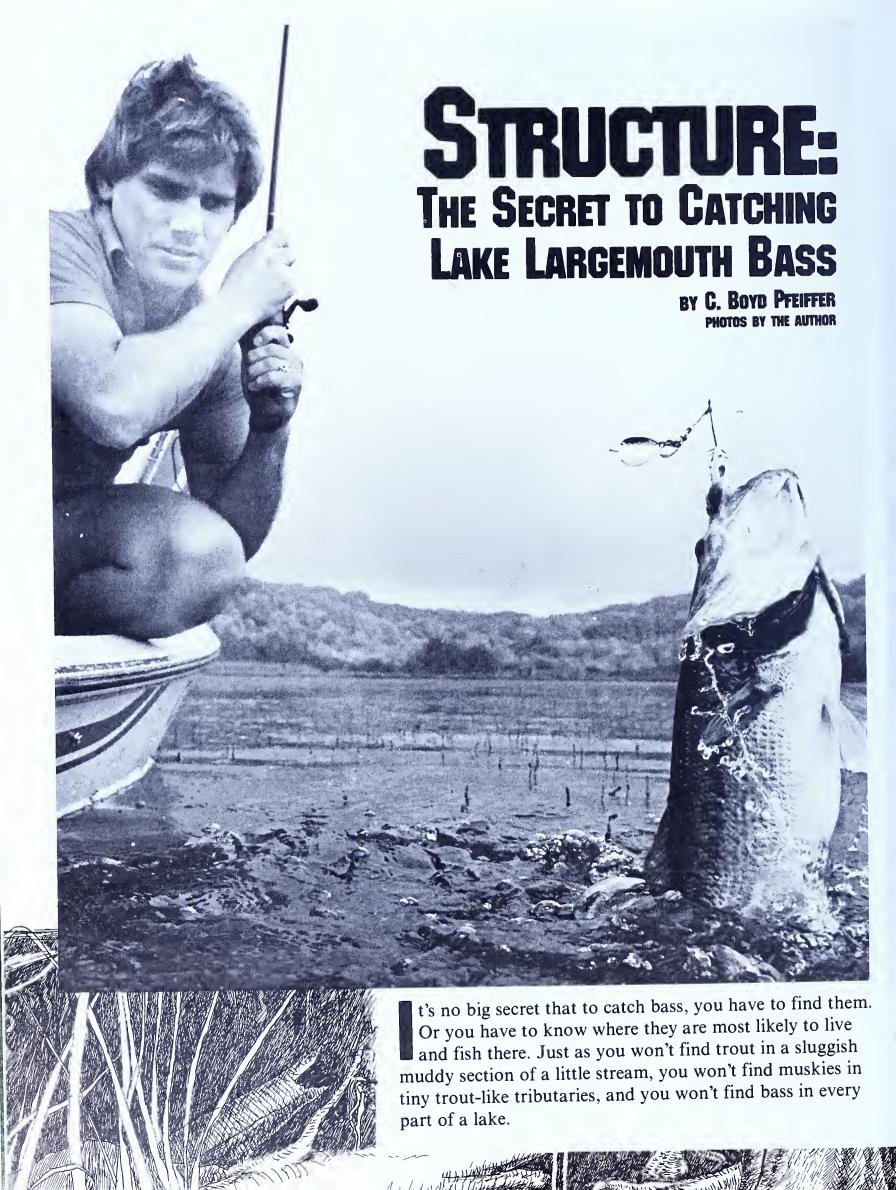
K: I'm sure that will be appreciated. Now how about some special where-to tips on northeastern Pennsylvania musky waters.

D: Okay, like I said before, the Susquehanna can be fished virtually anywhere in the North Branch and you'll catch muskies.

If I were really pressed for a top spot or two, I'd recommend the area off Route 187 near Terrytown in Bradford County; near the Great Bend launch site in Susquehanna County; in Wyoming County near the bridge at Falls and a little farther north of Tunkhannock; Coxton Yard in Lackawanna County, although the rocks can be tough on boats here during low water; and wherever you can find a carry-down access site or community access site in Luzerne County (they've really been catching some whoppers here).

As far as lakes go, I'd recommend the dam area at Frances Slocum (I caught five muskies there in one day). At Lackawanna Lake I'd suggest the Kennedy Creek mouth, State's Creek inlet, the dam, and the highway bridge. At Belmont Lake, the eastern shoreline. Any of these spots will get you real musky action, and one of these days one of them is going to produce that state record. I just hope none of your readers beats me to it.





We like to live in certain neighborhoods with certain amenities and with the availability of food stores. So do lake largemouths. Only instead of food stores and housing developments, this translates into structure of some sort that is near food or, more likely, has the ability to attract it.

For bass, this usually means something made of wood, or as a second choice, something made of rock, or as a close third, anything at all, provided that it is "different."

At a recent transfer of some bass by a bass club, the fish were kept in large tanks, almost like cattle watering troughs. But before transfers to new waters could be made, some of the fish started dying. The solution was found when a fisheries biologist suggested placing a stump, old board, rock pile, or anything similar into each tank. The result was no more lost bass. Without any structure to home in on, the bass became aimless, stressed, sick and dead, in about that order. With the structure, the bass had a "home," a base, a place to live, almost like we like to have a home to go to in the evening after working in a neighborhood where we feel comfortable.

Warm-weather structure is often deep structure because the bass will have moved into the shallows from the deep water. There they can hold on a breakline near some structure and move around to find food at will, but always be near their home base.

Home base for lake largemouth bass, then, is almost anything of wood. Dock pilings, duck blinds, stumps, standing timber, log jams, downed trees, brush piles, and downed logs are all prime spots. Second would be anything of rock such as riprap, rock piles, boulders, rocky points, rock cliffs with a point, etc. Place any of these primary or secondary structure types near a steep bank or breakline with a cove nearby for shallow water early morning and late evening food, and you have the makings of a bass hotel.

Just where the bass will be also relates to how much food is available and where it is located in relation to other structure. On a lake like Raystown, bass would be on the steep sides of long points, formed as the lake snakes tortuously toward the headwaters in the standing timber, or

off some of the steep shoreline areas where rocks, logs, and downed trees are prevalent. Bass clubs, with the permission of the authorities, have felled and chained trees to the shoreline along certain spots in Raystown, making these prime spots to throw a spinnerbait or through which to snake a worm.

Just how prevalent or scarce the structure is also helps pinpoint fishing. On a shoreline with many stumps in shallow water, the bass could be around any or all of them. To find the bass, you would have to fish virtually all the stumps. On the same shoreline with only a dozen stumps, the bass would have to concentrate on these stumps. In both situations, if you had a dozen fish, the first alternative could give you only one fish for every four stumps, while the second area would average one fish per stump.

This does not mean that in the second hypothetical area there would be one fish by each stump. There could be only five or six stumps that would attract bass, with each of these stumps holding from two to three or more fish. The rest would hold fewer fish, while half the stumps would hold no fish. Here's what makes a good stump: it's close to other protected areas and feeding places, and it offers the fish shade near current.

Shade

One of the main attractions to bass for both shallow water and deep water structure is the presence of shade. Small stickups have little shade and minimal attraction, while a large stump provides more shade and attracts more bass. One stump with only a few roots provides little protection; one with many roots offers more protection and holds more fish.

Lacking typical wood structure, rock is the next best choice, and it's the prime choice for lake smallmouths. Rock is less attractive than wood for one simple reason. First, the fish for whatever reason do not seem to like it as much, and second, the rocks usually don't hold as much fish life and organisms that are the bottom of a food chain and important as a cafeteria for bass. The wood gradually decomposes and attracts algae and weed growth, small organisms, ultimately fish, frogs,

crayfish, and insects.

In all cases, the single structure along an otherwise bare shoreline is almost always likely to hold fish, because it is the only game in town for the fish, the only place to rest in an otherwise void area.

In some cases structure and cover can be excellent, but difficult to fish. Such is the case with weeds, like the coves in the back headwaters of Lake Arthur, where weedy shallow coves traversed only by roadbeds flooded when the lake was formed. In these areas, the weeds in midsummer can be so thick that even though the bass might be in them, it is impossible to get a lure to the fish. The solution here is to fish the edges, such as the shoulders of the roads that traverse these areas. In most cases, they are void of any weed growth, or at least hold less weeds than the surrounding areas.

The result is that each type of structure is different, requires a different approach based on its water depth, and can be worked with different lures. Here's a selection of structure and cover for Pennsylvania and how to fish it.

Shallow-water stumps

These can be fished in several ways using a variety of lures. For average visible stumps, the fish will be on the downstream side if there is a current, or on the shady side on bright, sunny days. Because of the tendency of fish to shy away from bright open areas, spots like these are often best early in the morning and late in the evening. Best are bigger stumps in fairly deep water because they cast a larger shadow and thus are more attractive to bass. The best lures include spinnerbaits, crankbaits, worms, and pig and jig. For the spinnerbait, throw the lure well beyond the stump and bring it back past the stump. If possible run it into the stump—this action with any lure often triggers a strike.

Use deep-diving crank baits. The long bill causes them to run at a steep angle, and more likely bounce off any roots without getting hung up. To keep the lure from going too deep, hold your rod high. Worms are ideal dropped right on the edge of the stump or on top and snaked off into the water. Pig and jig can be worked along the whole area around the

perimeter of the stump, bouncing the jig along in short hops to simulate a crayfish leaving home.

Deep-water stumps

Use the same technique as you would with shallow-water stumps, only allow time for your lure to get down. If using deep-diving crankbaits, hold your rod tip down to keep the

lure deep and bounce it off the stump and its roots.

Rather than trying to cast lures well beyond the structure that you find on your depth finder, try to drop the lure right on top, especially in the case of spinnerbaits, pig and jig, jigs, and worms. Crankbaits have to be cast beyond the structure to get them down to the right depth in time.

Standing timber

Standing timber out of the water can be treated just like stumps, fishing the shallow side, running lures into the wood, casting lures past the timber so that any bass hugging right up to the wood will not be scared out of his scales by a lure dropping right into his living room.

Deep-standing timber

Deep standing timber, such as the flooded trees in Raystown, are another matter altogether. To fish them properly, once you find this structure, there are really four lures. If the timber is shallow enough so that the tops



are within 10 to 25 feet of the surface, try a deep-diving crankbait such as Norman Deep N, a Rebel Deep Wee R, a Bomber Model A, or

a similar lure. Work with the tip of the rod low or under the surface to gain maximum depth to the lure. If it gets hung up in some of the limbs, try a rapid shaking of the rod to dislodge the lure. This often triggers a strike, just as the lure comes free. Bass see the shaking lure, come to investigate, and strike it when they think that it is getting away.



Catching bass often requires learning about bass and knowing both where they are and why they are there.

Another excellent lure is the worm, fished with a pegged heavy bullet weight to get the lure down fast. Often a floating worm helps because the tail waves above the head and attracts more fish. Use a standard Texas rigging.

A jig or pig can be fished the same way. The fourth lure after all else fails is a structure spoon, something like a Hopkins, a Mann-O-Lure, or a Brawley spoon. Get right over the structure, using your depth finder to pinpoint the fishing. Throw out some floats (if the water is not too deep) to mark the area you wish to jig. Drop the lure to the top of the standing timber and vertically jig the lure with a stiff rod for maximum action.

Log jams, downed trees, logs, brush piles

All these are similar in that they look like impossible places to fish. The limbs and branches of logs crisscross and make a straight retrieve impossible. Here is the spot to break out your flipping rod, fishing a jig or jig and pig straight down into the small holes between the brush, logs, and debris. Use a long (7½ feet) stiff flipping rod, heavy line, and standard flipping technique to work areas like these thoroughly. If the area allows it, begin by first casting and working a spinnerbait around the edges or through any open water.

Deep-water debris, brush piles, log jams

Often these are difficult to outline specifically on a depthfinder unless you're using a graph recorder or high resolution LCD screen recorder. Once positioned right over the top of the structure, use floats to mark the area. Fish a deep-worked gently jiggled jig and pig or a structure spoon.

Duck blinds and boat docks

The big attraction of these areas is the presence of shade year-round, all day long. The protected water underneath duck blinds and docks makes prime habitat for big bass, even though most of us leave these same docks and travel for miles for fishing.

The big problem with fishing this type of structure is that you have to get the lure *under* the docks or blinds or similar structures to get the bass that are finning away there. You need a short casting rod using an

underhand cast to throw a low trajectory lure, or a flipping rod that allows you to drop a lure precisely at select targets under and along the sides of these spots.

Usually the lure must be heavy enough to work on a short-line cast, or light enough to flip delicately alongside a wood piling. This means casting with a spinnerbait or buzzbait, or flipping a jig and pig or bullet-head worm. While excellent any time of the year, this structure is especially good in mid-spring and also in the morning and evening in mid-summer.

Bridge pilings

Bridge pilings can vary between those monsters the size of a house to groupings of small, thin pilings. Both are good, although the many smaller ones often provide better fishing than the big monsters. The secret of these spots is that they offer the needed structure for the bass, yet allow the bass to hang suspended in deep water at the same time. Depending on the depth of the bass indicated by your depth finder, or expected by previous fishing experience, you can try several lures.

First, even before getting to the pilings, try a deep-diving crankbait and hold your rod tip down in the water to get extra depth. The trick here is to run the lure by the structure, even bump into it with the lure, if possible. After fishing the area this way, move over the structure and vertically fish a jig and structure spoon, gradually working it increasingly deep. Bass usually hang out on the shady side, or if there is a current, on the downstream or protected side.

Points

Points are ideal for bass, because they give bass that feeling of protection, especially if they are steep-sided, or have some other structure (stumps, rock piles, logs, etc.) on them. The prime points in the lake are going to be best early in the season with the secondary points better later in the summer and into the fall. Secondary points are those in back coves or out of the main body of the lake.

Good lures include shallow-running crankbaits, top-water lures in early morning and evening, and plastic worms.

Riprap

Many lakes use riprap in some way. Riprap is nothing more than piled buffers or shorelines of rock, usually placed around the shore where bridges are located, along dams, earthen works, dikes, roadbeds, or in areas where construction changes the shoreline and where the riprap provides erosion protection.

Fishing riprap right is a gamble, a gamble that you won't get hung up and lose a lure or have to go in and get it and scare the fish. The random piling of rocks varying in size from bread boxes and bedpans to Cadillac engine blocks and bedroom dressers makes this kind of structure a nightmare to fish. Naturally, all the best fish are in the crevices where the lures are usually lost.

To fish it, the best technique is to work the lure down the riprap from shallow to deep, keeping the lure as close as possible to the rocks or even bouncing it off the rocks. If you're fishing from the shore, you want to start deep and work up to shallow.

You can accomplish either strategy with a crankbait. When working from a boat, cast close enough to splash water on the rocks and begin retrieving, working the lure right along the same angle as the riprap. As you get deeper, lower the angle of the rod until the tip is underwater. For working from shore, start with a sinking or suspending lure and the rod tip down, gradually raising the rod tip to bring the lure up as you approach shore.

In addition to crankbaits, good lures include lightly weighted (1/8-ounce) worms, and a heavy jig and pig. Structure spoons are also good if you're able to drift the shoreline over the riprap and work the lure right in the rocks.

These spots aren't the only structure types or a complete classification of bass cover, nor a comprehensive listing of lures on how to fish them. It is a starting point, though. But the starting point that is most important is the one that begins with the realization that bass are not randomly scattered throughout a lake. They hold on certain cover at certain depths during certain seasons for specific reasons. Learning about bass, where they are, and why they are there is the first major step to getting them into the livewell.

Under Way at Night

by Joe Greene



he "rules of the road" on the water, or as they are titled now, the "Navigation Rules International-Inland," are sets of statutory requirements enacted by Congress to promote safe navigation. Included in these rules are the lighting requirements for recreational boats when operating between sunset and sunrise or during periods of restricted visibility during daylight hours.

The basic purpose of these lights is to prevent a collision by alerting each boat operator to the other's presence. In this respect, they differ from headlights on automobiles because they do not light up the water surface to detect hazards. Boat lights would be

more like parking lights when a car is sitting alongside the road.



Another purpose of navigation lights on a boat is that they indicate the relative heading of one boat as seen from the other. The lights displayed on a typical runabout are different colors, so the observer can tell which way the boat is heading. The red and green lights are located on the bow or forward part of the boat with a white light on the stern. These lights are also designed to show a specific arc of light.

The green light is located on the starboard or right side of the boat and shows an unbroken light over an arc of the horizon of 112.5 degrees from dead ahead to 22.5 degrees beyond the beam. The red light is located on the port or left side and shows the same arc of light on that side of the boat. The all-around 360-degree white light is displayed on the stern of the boat.

Illustration 1 applies only to runabouts and should not be confused with light configurations on other types of boats such as cabin cruisers, sailboats under sail, rowboats, and larger commercial vessels that you may encounter.

Knowledge of these lights is important because you are legally responsible for displaying lights of the proper color, intensity, location, and arc of visibility. This is important — when you remove the lenses for cleaning be sure that they are replaced properly.

Usually, when I have observed the red and green lights displayed on the wrong side, it is a result of improper replacement after cleaning.

Generally, the proper positioning of the lights is taken care of by the manufacturer. If the boat is certified as commally will not have to worry about the positioning or intensity of the lights. Proper maintenance, however, is your responsibility.

One other word of caution: No other lights shall be exhibited, except lights that may not be confused with the navigation lights or impair their visibility or distinctive character. Bright lights also must not be used that may interfere with your ability to keep a proper lookout.

Keep in mind that if you are temporarily using spotlights or flashlights, you cannot shine them into anyone else's line of vision and impair his night vision. I have found that the use of these lights narrows my field of vision and restricts it to just that beam of light. This impairs my ability to keep the whole field in my vision. Generally, I recommend using these lights sparingly and only when necessary, such as locating mooring spaces.

Many boaters feel uncomfortable operating at night because they don't understand how to interpret navigation lights or running lights. A suggestion that might help is to plan some of your trips just before dusk. Concentrate on what the other boats look like as it starts to get dark. Look at the lights while you can still see the hull. Make a mental image that you can recall when operating in total darkness.

Illustration 2 gives you some ideas to work with when you are under way.

With experience you will become proficient at interpreting these lights and also distinguishing them from shoreside background lights. It will open new horizons as I have found that cruising at night can be fun and relaxing.

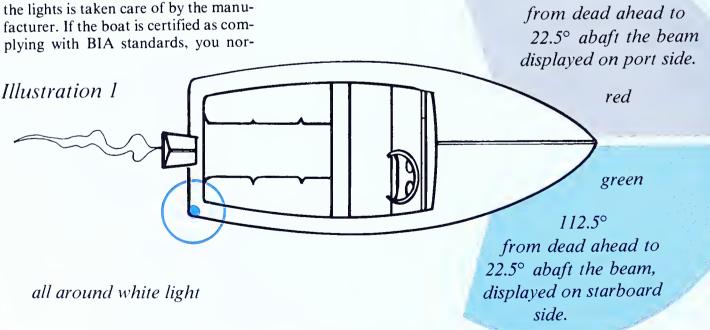


For a full explanation of all the navigation light requirements, consult "Navigation Rules International-Inland" available from: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The stock number is 050-012-00205-3 and the price is \$6 each.



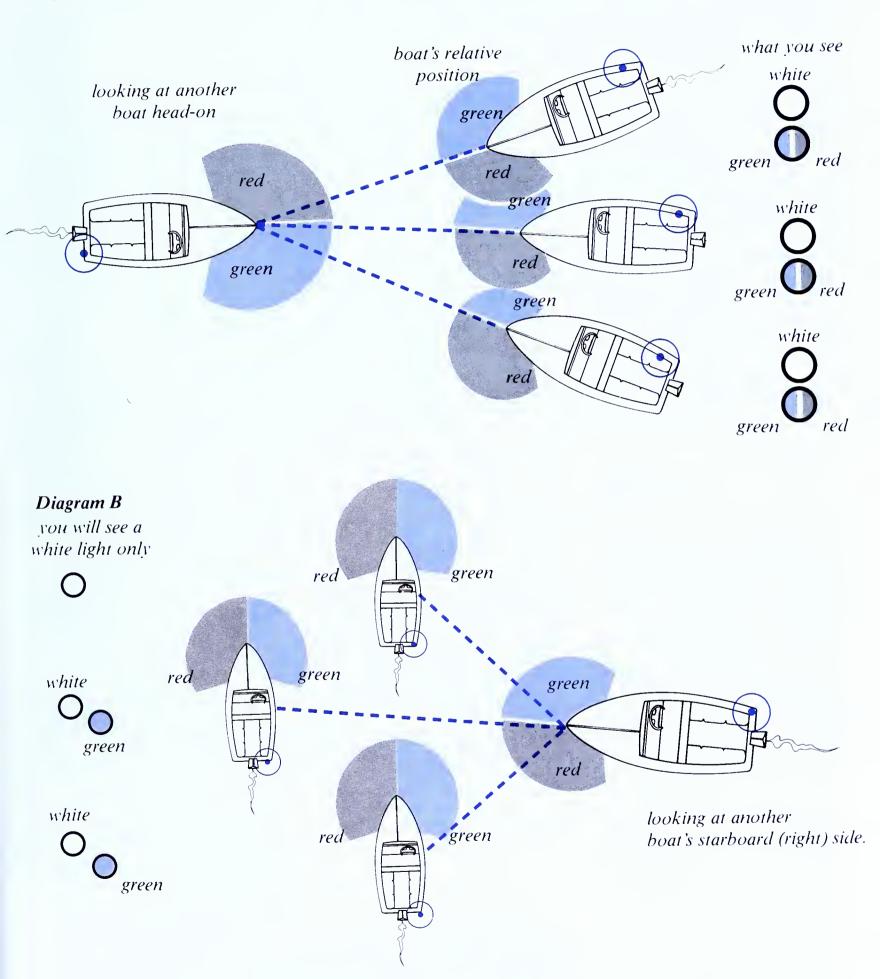
Joe Greene is a Fish Commission Bureau of Waterways boating safety education specialist.

112.5°



combination bow light.

The above diagram shows a typical display with a



The Flashabou Matuka



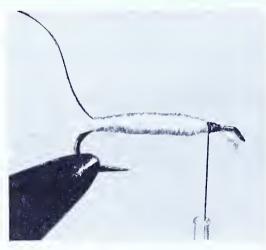


by Chauncy K. Lively photos by the author

he Matuka is a style of streamer fly that had its origins in New Zealand many years ago. Opportunistic American fly fishermen are



Clamp a size 6 or 8 long-shank hook in the vise and tie in 3/0 black monocord thread behind the eye. Cover the shank by winding thread back to the bend. Select two small bunches of pearl flashabou and tie them in separately on opposite sides of the shank at the bend. Then tie in a length each of fine copper wire and pale yellow or cream floss. Wind the thread forward over the butts of the body materials and half-hitch it behind the eye.



Wind the floss smoothly to form a tapered body. Tie it off at the head position and trim the excess.



Select four large, matched badger hackle feathers, mate them in two pairs, and place the pairs together with their dull or concave sides inside. Strip off the lower barbules until the wing is about twice the length of the hook. Then strip the barbules from one side of the lower stems for a length equivalent to the body length. Tie in the wing by its stems at the head position. Trim the

excess stems.

generally ready to pick up new ideas at the drop of a fishing hat, but why we waited so long to try Matukas is anybody's guess. Regardless, we seem to be making up for lost time; the past two decades have seen an upsurge in the Matuka's popularity, and nowadays various versions of the Matuka are found in the fly boxes of countless American anglers.

The Matuka is an unusual streamer and its appearance makes it readily identifiable. Unlike conventional streamers with feather wings attached only at the head, its wing is additionally bound to the top of the body with the ribbing material. This prevents the long feather wing from fouling the bend of the hook when cast, an occasional fault of traditional streamer wings.

Flashabou is a relatively new synthetic material designed, as its name implies, to add flash to streamer flies. It is marketed in bundles of thin, narrow strips and is available in several translucent colors. In normal use, a few strands are added to wing materials such as marabou or hair to provide additional sheen. It is also an excellent body material.

The Flashabou Matuka uses a wing of badger hackle feathers to represent the common dace minnows found in many of our streams. The wing

is dressed Matuka-style, bound to the body with copper wire ribbing, and the procedure is rather straightforward. However, special mention should be made of the unorthodox body dressing. Here the flashabou is used as a body covering rather than a body proper. A full, tapered body is first built up with cream or pale yellow floss and the flashabou strands form a translucent outer layer. Pearl flashabou not only lends a brilliant sheen to the body, but it adds an outstanding iridescence as well, alternately showing blue, silver, green, and pink hues from different angles of light. At the same time, it doesn't completely mask the color.

In dressing the pattern's body, two bunches of flashabou strands are cut from the hank. The length of the bunches should be about three times the shank length, and each bunch, when drawn flat, should be about a quarter-inch wide. The bunches are lashed to opposite sides of the shank at the bend, with butt ends extending no farther than two-thirds the shank length toward the eye.

Flashabou is filmy, gossamery stuff and it can be troublesome to work with when static electricity is present. Then the warmth of one's fingers will attract individual strands in helter-skelter fashion and in general, make life miserable. I solved this problem by fusing the free end of each bunch with heat from a cigarette lighter. Once the ends of the strands are fused together, each bunch becomes a separate unit and completely manageable.

After the flashabou is tied in, with its long ends extending behind the bend, a length each of floss and ribbing wire is also tied in at the bend. Then the thread is wound forward over the butts of all the body materials and half-hitched behind the eye. A floss body is wound, after which the wing is tied in place and bound to the body with the ribbing wire. Now the bunches of flashabous are stretched along their respective sides, with a few strands arranged along the body's underside, and tied off at the fore end of the body. The effect should be that of a light-reflecting sheath covering the body.

I dress the Flashabou Matuka on 3X long streamer hooks, mainly in sizes 6 and 8. However, you may tie the pattern as large or as small as your requirements dictate. I haven't yet tried it for bass, but I have a hunch a size 4 might dredge up a good smallmouth or two. My experience with the pattern has been entirely with trout, and they love it. The trick is to fish the Flashabou Matuka slowly and easy, completely fishing out every cast.



Arrange the wing over the body, separate the barbules above the bend, and bind down the wing with wire. Continue to wind the wire in spaced turns, crossing the hackle ribs with each turn. Tie off the wire in front of the body and trim the excess.



Stretch the two flashabou bunches along their respective sides of the body and arrange a few strands along the underside of the belly. Tie them off at the head and trim the excess.



Strip a bunch of barbules from a scarlet hackle and tie it in as throat hackle. Trim the excess, wind a neat head with thread, whipfinish, and apply head lacquer.

Streams of Steel

by Chuck Beckman

ctober is neither the cruelest nor the kindest month on Lake Erie. In October, angler conversations begin to sound like codas for the year, with final tallies entered for the number of walleye and smallmouth bass caught in the earlier part of the year. By mid-October, even most of the salmon have left the lake, migrating back into the same streams where they swam as fingerlings years before. October witnesses the turning of seasons, when the high clay banks bordering the lake are capped with the blazing maples in the full throes of change.

Lake Erie's fishery is both broad enough and good enough to have

attracted specialists for every gamefish species that swims. It's no surprise, then, that even when most anglers are busy finding winter storage space for their boats, other fishermen are making certain that their calendars are flexible for these last three months of the year, to have free time for days when the weather and water conditions are right for catching the last gamefish to show up in Lake Erie shallows: the steelhead.

For my money, quitting fishing for the year before the steelhead run is like getting in your car before the grand finale of a fireworks display to avoid the traffic. Lake Erie saves its best surprise for the very end.

I fought my first Lake Erie trout about 19 years ago, when I was so small I didn't have the strength to extricate the rod from the boat holder when the fish struck. Salmon were just a rumor in the lake at that time, and my father and I had gone out trolling in the hopes of finding a lateseason smallmouth or two feeding on the shoals. If the passage of time exaggerated my memory of that day —crystal clear, with a sparkling chop to the water-it also has exaggerated the trout that struck and surged out to open water and churned the surface several times until finally tiring and permitting itself to be reeled up to boatside, its crimson sides contrasting sharply with the heavy speckles across its back.

In talking about steelhead, however, I always make a careful distinction between fought and caught. The trout, spooked by the boat, suddenly surged straight for the bottom, and the last I saw of the Mepps spinner I'd been using was in the beaklike jaw of the trout as it vanished into the opalescent depths. That was the first trout I lost. It wasn't the last.

Stocking

In recent years, Commission fisheries biologists have been doing their homework on Lake Erie. That fish 19 years ago was a Cro-Magnon strain of trout in Lake Erie, officially known as a "domestic strain squaretailed rainbow trout." In other words, that fish was a bigger version of the regular put-and-take rainbow stocked in most Pennsylvania inland streams, Lake Erie's tributaries included.

In the spring of 1986, the decision was made to stock only brown trout into Pennsylvania's Lake Erie tributaries for the spring put-and-take fishery. According to Roger Kenyon, Fish Commission Lake Erie Research Unit Leader, the move was made for simple reasons of economics and preservation: a ban has been placed photos by the author Pennsylvania Angler

on any further importations of steelhead eggs or fish from the West Coast, due to a significant disease risk that accompanied these fish.

This revised policy, according to Kenyon, will result in a genetically purer native steelhead strain in Lake Erie from which to draw future generations of trout. Previously, due to their genetic intermixing, no two steelhead caught from the lake looked exactly alike: shades of domestic, palomino, and mint-silver steelhead always kept things interesting. Kenyon intends to maintain the lake's reputation for variety with continued (and in some cases, increased) plantings of steelhead, brown trout, and a new steelhead strain called the "Skamania," known for its summer spawning habits, torpedo shape, and line-peeling runs. The Fish Commission and 3CU Trout Club are both working cooperatively to ensure a four seasons trout fishery in Lake Erie.

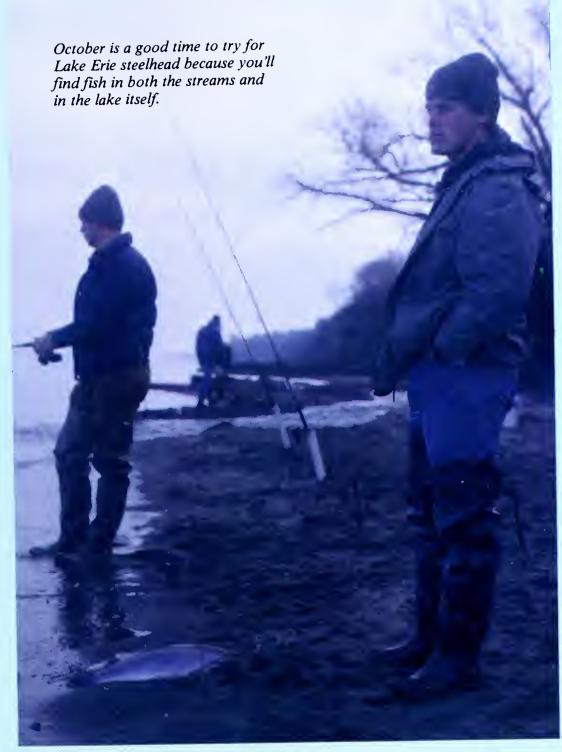
Trophy fish

The 1985 Fish Commission Senior Angler Award for steelhead illustrates successes month by month, and in October of last year, anglers registered 23 citation (8 pounds and over) steelhead, a number second only to August, when deepwater anglers scored 35 citation-sized fish. In most years, November and December prove equally productive for the silversides, but November 1985 in Erie turned out to be one of the soggiest months since the Great Flood, and the creeks were roily and unfishable for nearly the entire month.

But if you decide to try your luck for Lake steelhead, October is certainly the month to start planning it. If you're self-employed or independently wealthy, you'll be able to choose the conditions under which you fish. If you're like the rest of us, however, you'll have to accept whatever conditions Mother Nature dishes out.

At this time of year, you'll find hungry steelhead in both the streams and in the lake itself. It's in the streams, though, where the steelhead become most accessible to shorebound anglers with some knowledge of inland trout fishing methods.

In an Erie autumn, you can expect



to find innumerable combinations of weather conditions that either help or hinder your success. Generally speaking, though, you can expect to catch a trophy steelhead or two when you come to Erie, provided you're able to surmount a barrier I sometimes find difficult to hurdle: hitting the snooze bar on the alarm clock repeatedly until the sun is high in the sky.

Here are two opposite weather/ water conditions you might encounter while fishing in Erie's tributary streams. I offer these not as a rigid formula, but as a means of providing a foundation for the newcomer angler to know how to think about steelhead fishing.

Low Water

Low water is the condition to which creeks subside three or four days following an autumn rain. Generally speaking, the steelhead are most difficult to catch then, because they either retreat back into the lake, or to holding stations in safe areas of streams: under rock ledges, bottom snags, submerged trees, or the deepest holes.

On days like these, the wise angler heads to the stream at, or better yet, before dawn, and approaches the water the way a cat approaches mice. Stealth is the key. It also helps to have scouted the stream earlier, so you're sure that the stretch of water you decided to fish is actually a deeper



hole, and not a shallow slate run with a deceptive surface appearance.

Low water also means clear water, so go as light as possible with the equipment you choose. As a kid, I used to go to circuses, but never understood why anyone in his right mind would venture into the lion's cage armed only with a whip and chair. The first time I went fishing for steelhead with three-pound test and size 14 hooks, I understood the lion tamer's secret: it's not coercion, it's finesse.

Realism in bait choice is also critical to low-water fishing success. Artificial lures typically are of little help in clear water. I even avoid the pre-tied nylon pouches of salmon eggs that bait dealers sell in favor of three or four eggs held together by membrane and draped on a size 12 or 14 hook. Use as little weight as possible, and when that first steelhead of the day inhales your offering, you might think that the lion tamer has an easier task than you now have.

High water

Depending on how high the water may be, the fishing can range from stupendous to dismal. The reason why steelhead specialists keep their calendars flexible at this time of year is to catch those banner days which follow a stretch of foul, rainy weather. Lake Erie's tributaries are all fairly short, so they drain a relatively small area. Consequently, the stream water usually subsides to fishable levels 12 to 24 hours after heavy rain. During this period, pounding the beat for steelhead can provide an unforgettable fishing experience.

How muddy is muddy? Two years ago, I miscalculated the drainage of

Elk Creek and arrived streamside only to find the creek still rolling and so dirty that my salmon egg bait disappeared completely from sight only three inches under water. Halfheartedly, I made cast after cast to the swirling edge of the current, and halfan-hour later was about to head home to warmer surroundings, when the snag I thought I'd latched onto suddenly shot upstream.

That fish used the current to his fullest advantage, bulldogging and burrowing into the center, and it was 15 minutes before I could turn him and lead him into shallower water. It turned out to be the biggest fish I'd fought that year. I say fought, because I made the fatal mistake of grabbing the line to tow the fish to shore. Steelhead seem to have an uncanny ability to capitalize on angler blunders, and this one was no exception, as it surged suddenly and ended the fight then and there.

The first rule that changes in high water conditions is where to find the fish. High water both attracts more steelhead into the stream, and provides more cover for the fish to station themselves safely. Slate runs formerly not deep enough to hold chubs might now hold an 8-pound trout, as might the nearby submerged bank. Take nothing for granted. Fish small pockets carefully until you've caught a fish or have come up empty.

As far as lures and bait go for highwater trout, Henry Ford probably exemplified the kind of thinking a steelhead angler should employ. About his Model T, Ford said that you can have it any color you want, as long as it's black. Similarly, fishermen should use any bait they want, as long as it's a salmon egg.

Actually, that rule has changed slightly. Other natural baits, such as worms, grubs, or minnows, also take fish if deftly presented. In high water, though, artificial lures sometimes fool trout. On a few occasions, I've nearly had the rod thumped out of my hand while working a 1/32-ounce white Mister Twister through a slow, deep run. Small spinners take steelhead, too, especially if fished around tree snags or undercut banks, where a normal dead-drift presentation is difficult.

Perhaps the biggest news on the streams, though, is that a new breed of steelhead flies, developed on the Upper Great Lakes, sometimes outfishes natural offerings. Two years ago, I had my first success using this poly-yarn chartreuse roe fly. The fly, tied on a short shank size 12 hook, actually aids in hooking the steelhead because the yarn sticks to the steelhead's row of sandpaper-fine teeth. In addition, fluorescent Spring Wigglers and even traditional streamer patterns also provide an irresistible meal to Lake Erie's greatest

Low water or high, if you're familiar with the stream and with the habits of the steelhead, you can reasonably expect to tie into what some consider to be the greatest gamefish in the Great Lakes. Erie's fishery is one that, with continued efforts by the Fish Commission and 3CU, will keep anglers busy four seasons each year. Match your wits with the prevailing conditions when you visit Erie, and you could be well on your way to doing battle with the biggest, hardest-fighting fish you've ever fought. PA

I say fought.



Pennsylvania's Steelheads:

Where, When, and How Anglers Catch Them

by
Art Michaels

he Fish Commission offered 141 Junior and Senior Anglers awards for steelhead trout in 1985. The minimum size for the senior award is 8 pounds; the junior award, 6 pounds. Here are the specifics concerning those 141 fish.

When

The only months during which no steelheads were caught were February and June. The numbers caught for other months are as follows: January, 2; March, 12; April, 15; May, 8; July, 14; August, 35; September, 6; October, 23; November, 15; and December, 2.

Where

Most steelheads were caught in Lake Erie—67. In Walnut Creek, 35 were taken, and 26 were caught in Elk Creek. Sixteenmile Creek accounted for three, Twentymile Creek gave up four, and Trout Run harbored two. Two were taken in Crooked Creek, and Presque Isle Bay and Shorewood Creek both accounted for one each.

Lures, baits

Here in order are the lures and baits that accounted for the 141 award-winning catches. Unidentified lure, 29; egg sac, 28; spoon, 27; salmon egg, 14; worm, 13; fly, 9; spinner, 8; K-O Wobbler, 4; grub, 3; minnow, 3; and one each was caught on a jig, a Rapala, and a marshmallow.

New Steelhead State Record

George M. Harchar (holding fish), of Munhall, PA, caught a new state record steelhead trout on July 19, 1986, in Lake Erie. The 17-pound, 2-ounce trout walloped a spoon while Harchar was trolling. The fish measured 35 inches long.

The former steelhead trout state record, set only last year, was a 15.75-pound fish caught in Lake Erie by Joseph Sziraki, of Leechburg, PA.



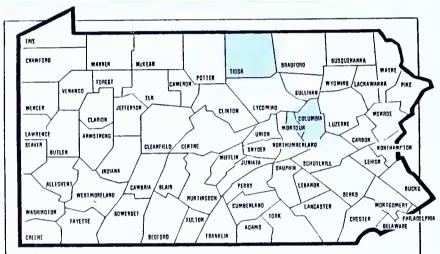
Last October, 23 steelhead catches qualified anglers for awards. Only in August were more award-winning steelhead caught than during any other month of the year—35.



County Features



Montour, Columbia, and Tioga Counties



olumbia and Montour counties lie in eastcentral Pennsylvania. 1-80 splits both counties for easy access to all parts.

There is year-round fishing available, from the native brook trout to the brown trout, smallmouth bass, largemouth bass, walleye, and musky.

Montour County

by John W. Weaver

Mahoning Creek

Mahoning Creek receives both preseason and inseason trout from the Borough of Danville upstream for four miles. Access is available by Route 54 for 2 miles paralleling the stocked area and by Route 642. The best trout fishing is in April and May with minnows, spinners, worms, salmon eggs, and corn. Fly fishermen have some success after the early season pressure is off the stream. A special regulation area is available for children at the Danville High School. It is maintained by the Danville Police, Danville Borough, and area businesses.

Kase Branch

The Kase Branch is a small tributary to Mahoning Creek. It receives preseason and inseason trout, and the best fishing time is April and May. It parallels I-80, but good access can be gained from Route 642.

Mauses Creek

Mauses Creek is another tributary to Mahoning Creek, which parallels Route 54 through the town of Mausdale. It receives a preseason stocking of trout. The best fishing time is in April or anytime after a rain. Worms and minnows are a good bet here for bait.

Lake Chillisquaque

Lake Chillisquaque is a 165-acre impoundment owned and maintained by Pennsylvania Power and Light Company as an emergency water supply for its coal-fired power plant. It can be reached by Route 54 north of Washingtonville.

Chillisquaque is an Indian name that means "song of the wild goose." The lake contains the usual warmwater species: muskies, northern pike, walleye, largemouth bass, crappies, bluegills, sunfish, and brown bullheads.

There are bass up to six pounds here. A recent survey conducted by Fish Commission biologists showed that there is a good population of 12-inch-plus largemouth bass. Electric motors are permitted from the first of May until ice-over.

Susquehanna River, North Branch

The Susquehanna River is about 10 miles long in Montour County. It has a good population of smallmouth bass. Other fish in the area are muskies, walleye, channel catfish, and the forgotten fish, carp. There is good fishing year-round for at least a few species. The best baits are hellgrammites, minnows, and worms. Lures to try are the Rapala, jointed minnows, and spinnerbaits.

Access to the river is limited with one Fish Commission access area located on the Danville State Farm. Signs are posted on Route 11 north of Danville. It is maintained by Montour County.

Columbia County

by John W. Weaver

Columbia County offers some of the best freestone stream trout fishing in the state. Bait fishermen catch trout on worms, nightcrawlers, mealies, salmon eggs, cheese, marshmallows, and corn. Lure fishermen using small spinners and spoons score well. Fly fishermen do well with streamers, nymphs, and wet and dry flies. The warmwater fishermen have a good chance of catching largemouth and smallmouth bass, tiger muskies, bluegills, walleye, bullheads, and some really nice channel catfish.

Briar Creek Lake

Briar Creek Lake is a 50-acre impoundment that for the past two years has been stocked with trout. The facility is maintained by Columbia County as a county park. It is located approximately two miles west of the Borough of Berwick. Signs are located from Route 11 to the lake. Electric motors only are permitted.

Trout fishermen do well from opening day through the month of May using worms, minnows, and spinners. As the lake warms, crappies, perch, and bluegills are the main quarries. It also has a population of largemouth bass with the best catches at night. Walleye fishing is spotty with the continuing stocking program with fingerlings. The best ones are caught through the ice. There are a few muskies in the lake, but this program has been discontinued.

Fishing Creek

Fishing Creek is one of the best freestone trout streams in the state with a heavy annual stocking program. It is stocked from Grassmere Park at Route 118 downstream to Lightstreet, a distance of 18.8 miles. A few sections are posted and should be avoided. These sections are not stocked. Route 487 parallels the creek from Camp Lavigne to Lightstreet. Camping facilities are available at several locations on the stream.

Early-season trout fishermen do well with spinners, worms, salmon eggs, corn, minnows, nymphs, and streamers. As the season progresses fly fishermen take over and do well with dry flies and still later with terrestrials like ants, grasshoppers, and beetles. People who can stand the cold do very well in the winter months through February.

A catch-and-release area of one mile is available at Grassmere Park at Route 118. Here spin fishermen do as well as the fly fishermen. Barbless hooks are required. This section is open year-round and is stocked.

West Creek

West Creek is stocked a distance of 4.4 miles from its confluence with Fishing Creek upstream. Route 239 parallels most of the stream from Benton to the upper stocking limit. It is stocked with the three species of trout preseason and also inseason. The usual baits are good in April and May with some fly hatches over the summer. A few wild fish are available for the small-stream fly fisherman.

Roaring Creek

Roaring Creek is stocked a distance of 13.5 miles from near Slabtown to the confluence with the North Branch Susquehanna River. Route 42 and also Route 487 cross the stream in prime fishing areas. The best fishing times are from opening day through June, because it receives a preseason and inseason trout stocking.

Four campgrounds are located on the stream—Ideal Park, Spring Brook Park, Lake Glory, and J and D Trailer Park. Any one of these areas would be a good starting point for a weekend or week-long fishing trip.

Beaver Run

Beaver Run is located in the southeast portion of Columbia County and flows through the town of Shuman on Route 339. It receives a preseason and inseason stocking of brook, brown, and rainbow trout. Beaver Township Rod and Gun Club have a cooperative nursery on the stream,

and these fish are also placed in the waterway. It is stocked a length of three miles. The best baits are worms and salmon eggs. Most of the stream is inaccessible by road and offers walk-in fishing.

Scotch Run

Scotch Run is also located in the southeast portion of Columbia County with its headwaters originating in Luzerne County. A portion of the stream flows through state game lands 58. L.R. 19015 parallels the stream. It receives a preseason and inseason stocking of brook and brown trout for a distance of 5 miles.

The best baits are worms and small spinners, and the best times to fish are from opening day through June. Most of this stream is also inaccessible by road and is walk-in only.

Little Fishing Creek

Little Fishing Creek is stocked a distance of 12 miles from the town of Eyersgrove on Route 42 through Millville, Iola, and then along L.R. 19061 to the foot of Mendanhall Hill. It receives a preseason and inseason stocking of brook, brown, and rainbow trout. From Iola to the headwaters at Route 118 there is a good chance of catching native brook and wild brown trout.

Downstream from Eyersgrove to the confluence with Fishing Creek, anglers can take some nice smallmouth bass.

The best baits are worms, corn, and minnows for the first few weeks of the season, then spinners and wet flies in the usual patterns, and then later dry flies.

Mugser Run

Mugser Run receives a preseason stocking of brown and rainbow trout. The best fishing is in April and into the beginning of May. There are a few holdover trout and a person must work to take these fish. The run flows into the south branch of Roaring Creek at Knoebels Groves. A township road parallels the run from its confluence through Fisherdale for a distance of 4.4 miles.

Briar Creek

Briar Creek can be reached by Route 93 between Orangeville and Berwick or by Route 11 in the Borough of Briar Creek. It receives a preseason stock only of brook, brown, and rainbow trout. The best baits are worms, salmon eggs, minnows, and spinners. The best time to fish is in April.

West Branch Briar Creek

West Branch Briar Creek can be reached by L.R. 19034 at Fowlersville on Route 93. It receives only a preseason stocking. Everything for Briar Creek would apply.

North Branch Susquehanna River

The North Branch enters Columbia County at Berwick and flows in a westerly direction for a distance of 20 miles before it enters Montour County.

For many years this section of the North Branch has been well-known for its great smallmouth bass and walleye fishing. Other fish caught here are muskies, occasional northern pike, occasional yellow perch and calico bass, rock bass, nice channel cats in the 8- to 12-pound range, bullheads, huge carp, and suckers.

Muskies have been stocked for many years, and they can

be caught either from shore or by trolling. Fish in the 10-pound to 20-pound range are common with an occasional 30-pounder. The muskies go for large deeprunning plugs, like the jointed Rapalas, Rebels, large spinnerbaits, and suckers in the 6- to 8-inch range. The best time to go for them is whenever you have a chance.

Bass and walleye fishermen have the best chance in the early morning and late evening. Shore fishing is as popular as boat fishing either by trolling, drifting, or anchoring. The best lures to use are spoons, spinnerbaits, or Mister Twisters in ½-ounce, ¼-ounce, and ½-ounce heads. Live baits to use are stone cats, minnows, and the old garden hackle. Fly fishermen also have a good chance of taking nice smallmouth bass with streamers and also larger dry flies.

Boat fishermen must use smaller boats with a maximum horsepower of 20 because most of the year the river is low and this smaller equipment allows you to cover more of the good available water.

Boat access to the river in Columbia County is limited with a paved ramp at Berwick's Test Trackpack, Mifflinville with a cartop ramp at the town park, and a paved ramp at the East Bloomsburg Bridge leased by the Fish Commission and maintained by the town of Bloomsburg. Indian Head Campground has a dirt ramp that can also be used. At the present time no other public access is available downriver to the county line.

Some of the hotspots for all of the warmwater fish are just downriver from the Berwick-Nescopeck bridge, at the islands of Mifflinville, around the islands in the Bloomsburg area, the snow dump area in Bloomsburg, and at the mouth of Fishing Creek.

John W. Weaver is the waterways conservation officer for Columbia and Montour counties.

Tioga County

by George E. Osgood, Jr.

Tioga County is on the state's northern tier, between Lycoming County and the New York border. At 1,150 square miles, it's the second largest county in Pennsylvania. The sparsely populated county is a mix of heavily forested mountains and farmland, and offers 90 miles of stocked trout streams and 1,186 acres of warmwater and coolwater fishing.

Hills Creek Lake

This 137-acre lake, at Hills Creek State Park, is the most popular warmwater fishery for good reason: It has yielded the largest muskies and walleye in the county and also provides some of the best largemouth bass, bluegill, and perch fishing. Muskies run to 20 pounds, bass to eight, and walleyes to 10. To get there, take the Charleston Road east out of Wellsboro and follow the signs.

The lake's weedy shoreline and abundant stumps and underwater brush provide good structure for bass and muskies. There are deep holes, too, especially near the southern end of the lake, where most of the walleye fishermen hold forth. The best walleye fishing runs from May to July. Bass hit most readily in July and August, and

musky fishing peaks in October and November.

Spinning, spincasting, and baitcasting tackle are used by most anglers, although flyrodders take a lot of bass and panfish on poppers near the north end of the lake. Jigs and action-tailed lures in yellow, green, and black are favorites of the lake's walleye fishermen. Bass anglers are partial to live shiners, crankbaits, and black or red and white Jitterbugs. Musky anglers prefer live chubs or suckers, large spoons, or perch imitations fished with heavy casting outfits. Ice fishermen report good catches of pickerel, perch, and bluegills.

There's an electric-motor-only regulation at the lake, which offers two boat launching areas, picnic and camping facilities, and beach and bathhouse.

Cowanesque Lake

This 410-acre lake, created six years ago by the Army Corps of Engineers, is located two miles west of Lawrenceville along Route 49 (south side) or Bliss Road (north side). From the beginning, the lake has been stocked with tiger muskies, walleye, largemouth bass, channel cats, and crappies and also holds a large population of smallmouths.

Because of dam works, cliffs, and heavy brush, fishing from shore is very limited at Cowanesque. Boat fishermen should do well on the stretch of water just east of the launching area on the Route 49 side or near the west end of the lake on the Bliss Road side. Musky fishermen rely on large shiners or chubs, oversized Rapala or Rebel minnows, and other big plugs. Walleye anglers here report the best success with small to medium-sized minnows and nightcrawlers. Bass anglers use a variety of artificials, including Cotton Cordells in white or chartreuse and purple or black plastic worm rigs. Ice fishermen find plenty of panfish and pickerel and an occasional bass. Walleye anglers seem to do best in May and June. Fishing for muskies and bass peaks in September and October.

Hamilton Lake

Hamilton, a 42-acre manmade lake two miles southeast of Wellsboro, holds both coldwater and warmwater species. It's heavily stocked with rainbow and palomino trout, some in the four- to six-pound range. The best trout fishing occurs from opening day through June, when hundreds of anglers take limits on corn, cheese, salmon eggs, mealworms, and Mepps or C.P. Swings.

As the trout fishing wanes, the bass fishing picks up and peaks in August and September. Largemouths over eight pounds were caught in Hamilton in 1985, but bass fishermen are still vastly outnumbered by trout anglers. Spinning tackle is the rule and popular lures include Rattletraps, plastic worms, and balsa minnows.

Shore fishermen will probably do best along the east side of the lake and next to (but not on) the dam breast at the northwest end. Boat fishermen are limited to electric motors. The lake gets a late-season stocking, so it's a good bet for ice fishermen seeking trout. The best offering then is a mealworm-and-jig combination.

Beechwood Lake

This waterway is another popular spot that combines coldwater and warmwater species to provide plenty of action from mid-April through February. To get there, take Route 349 south from Westfield, turn right onto L.R. 58021 in Sabinsville and right again onto Township Route 360.

In general, the guidelines for Hamilton apply to Beechwood, although Beechwood is larger, at 67 acres, somewhat deeper, and holds more structure. It gets less fishing pressure than Hamilton throughout the year, but trout fishing at Beechwood is at least as good and is probably better for boat fishermen. The best spots are from the parking area to the dam and, later in the season, along the north side of the lake.

Crappies, although underfished, are one of the lake's best assets. A small but fervent group of crappie anglers regularly takes home stringers of 8-inchers to 12-inchers. Drift fishing small live minnows or trolling small jigs tipped with mealworms are the favorite methods. A boat is a must for consistent crappie fishing success here.

Like Hamilton, Beechwood gets a healthy late-season dose of trout and provides top-notch ice fishing.

Pine Creek

This stream may be the best combination of trout and smallmouth bass fishing and dazzling scenery in the state. Pine Creek flows 10 miles along Route 6 from the Potter County line to Ansonia before it joins Marsh Creek and turns south to run 16 miles through the Pennsylvania Grand Canyon. The two sections are different in appearance and accessibility. The creek from Ansonia west is wider, flatter, and draws more fishermen. It's within easy walking distance of the road and "hotspots" are few, simply because the creek is heavily stocked and holds trout so well.

A two-mile section south of Ansonia is accessible from the Owassee Road. Take Route 6 to Ansonia, turn onto the Colton Point Road, and make the first left. The creek parallels the road. Fishermen who park at the end of the road and hike in will see the tree-covered canyon walls rising nearly 1,000 feet on both sides and can fish riffles, flats, and what locals concede are the biggest, best pools on the creek.

The best fishing for browns and rainbows is from April through June in the upper section and from April through August in the lower stretch, where fishing pressure is much lighter. Minnows, worms, and Mepps, Roostertail, and C.P. Swing spinners take a lot of trout from Pine Creek, especially early in the season. It's a superb fly fishing stream through late summer, easily waded, with plenty of room for long casts and blessed with frequent, largely predictable hatches.

Smallmouth fishing picks up in August and is best in September and October. Most of the smallies come from the deep pools in the lower section. Many fall to spinners and live shiners, but the favorite local bait is the "stone catty," a tiny catfish collected by hand along the stream bottom.

Stony Fork Creek

Stony Fork Creek, south of Wellsboro, is a long, gravel-bottom stream stocked several times a year with brown and rainbow trout. Fishing is best in the section between the old picnic area and the mouth of Paint Run, about two miles to the south.

To get there, take Kelsey Street out of Wellsboro and go through the villages of Stony Fork and Draper. Bear left where the road forks. The creek, although not always visible, runs parallel to the road.

Boulder-strewn and scenic, Stony Fork is equally popular with bait, lure, and fly fishermen. It yields the best catches from April to mid-June, although it holds trout all year and harbors some browns in the 20-inch range. The most popular baits are worms, corn, salmon eggs, and small yellow, brown or white spinners. Stony Fork offers excellent fly fishing, especially with dries during mayfly hatches, but some expertise is required to deal with trees and brush close along the bank. The water is notoriously clear and a stealthy approach is necessary. Wading can be a challenge and is impossible along some stretches, but fishing from the steep banks and rock ledges is easy and effective.

Mill Creek

Mill Creek, northeast of Mansfield, offers 11 miles of easily accessible water stocked with brook, brown, and rainbow trout. Take Route 6 east from Mansfield, turn left onto Route 549, and go five miles to where the creek passes under the roadway. The upper half of the narrow, winding creek has a silt bottom and slow stretches, with deep pools that hold trout through most of the summer. The lower half has a gravel bottom, and is shallower and much easier to wade.

The best action is from opening day through mid-June. Corn, mealworms, salmon eggs, minnows, and spinners are the favorite offerings of spinfishermen. Flyfishing, especially with wets and nymphs on the lower section, provides a lot of action from April through May.

There are good spots above and below where the Sopertown Road passes over the creek, north of Roseville, below the Route 549 crossing, and along the edges of farm fields in the midsection of the creek.

Native brook trout streams

There are literally hundreds of pristine mountain streams in Tioga County that hold brookies, and angling for the feisty, multi-hued critter can be one of the sport's most rewarding, relaxing experiences. The trout run from tiny to 12 inches or so, depending on the particular stream and competition for food. Because many of the brookies are under seven inches, barbless hooks are recommended for easy releases.

The native brook trout hit just about any natural bait that flows by and they aren't clock-watchers, either. Dry flies, especially attractor patterns and parachutes, are very effective. There is one "best" time to fish for small-stream brookies, especially for larger ones. That's when the streams are on the rise, during or just after a rain. The higher flows from runoff bring extra food to the stream and stimulate feeding. The roily water makes the trout less spooky, too.

Some of the county's best brookie streams are Baker Branch and Straight Run, near Asaph; Four-Mile Run, on the rim of the Pennsylvania Grand Canyon; Phoenix Run, near Gaines; and Billings Branch, in Elk Township.

PA

George E. Osgood, Jr., is the Tioga County bureau chief and an outdoor feature writer-photographer for the Elmira Star-Gazette. He gratefully acknowledges the assistance of Tioga County Waterways Conservation Officer Ray Hoover in preparing this article.

ANGLERS CURRENTS

Susquehanna River Maps

The Susquehanna River Tri-State Association offers maps of the Susquehanna River. Each map includes a river section of a few miles with clearly marked bridges, campgrounds, riffles, navigation cautions, boat rentals, accesses, mile markers, tributaries, landmarks, population centers, and other points of interest.

For complete details, contact: Susquehanna River Tri-State Association, 441 Stark Learning Center, Wilkes College, Wilkes-Barre, PA 18766. The phone number is 717-824-5193.

Salmon Fishing Publication Updated

Salmon Fishing in Pennsylvania, the Fish Commission's 4-page pamphlet that details information on Lake Erie salmon and trout fishing, has been updated and reprinted. Included in the publication are subjects like best baits and lures, tackle, boat fishing, boating safety, shore fishing, fish identification, and launch sites. The pamphlet also includes a large, detailed map of Lake Erie and vicinity.

For a free copy, send a self-addressed, stamped businesssized envelope with requests to: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673,

Harrisburg, PA 17105-1673.

Anglers Notebook

by Dave Wonderlich

Various lures provide the best action when worked at different speeds. When using new lures, experiment with trolling and retrieving speeds to determine conditions for maximum performance.

When trolling for salmon and lakers, lure choice should include Evil Eyes, S. Davis Dodgers, "See" Flies, and Bagley Bang-O-Lures in 3-inch to 5-inch sizes. Try darker lures on overcast days and light imitations on bright or sunny days.

To prevent dirt and algae from collecting along the waterline of your boat, spray on a good coat of Pam (cooking spray). The sprayed surface allows for quick and complete cleanup with only a damp rag.

When using snap swivels with light spoons, separate the snap and swivel with three feet of mono. This takes the nose weight off the spoon and allows it to flutter properly.

Wetting a loose knot before pulling it tight prevents the line from weakening and allows for a tighter connection.

For optimal lure action use a round rather than angled snap. The round shape allows for better wobble and won't lock on the lure.

Be sure to check the grease supply regularly in your boat trailer wheel hubs. If you have bearing protectors, the condition of the bearings and the grease is easier to determine. Still, check the grease regularly to prevent breakdowns.

Pike eat heavily before colder weather sets in. Try weedless plugs and wobbling surface lures in deeper pools bordered by weeds, lily pads, and grass.

An Adams dry fly is a good imitation for the Slate Drake, which is still hatching on Pennsylvania waters during October.

Fish often move around more in the fall than they do in the hot summer months. Thus, if the fishing is slow, explore and try some spots that didn't produce in the summer. You might find some cruising fish, or even locate some prime fishing water that has gone unnoticed.

Try fishing bigger baits or lures in the fall. Fish are usually aware of the forthcoming winter and the slimmer pickings available then and thus try to eat more to hold them through the winter. Big baits and lures that appear crippled or injured look like an easy meal to most fish.



PENNSYLVANIA

Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities.

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Ron Torok, of Lewistown, holds an albino channel catfish that he caught last July in the Juniata River near Granville. The fish is a true albino, with pink eyes and translucent white skin, and according to Fish Commission Area Fisheries Manager Larry Jackson, the catch was "extremely rare." The 16-inch fish was kept alive in a water-filled cooler, and was put in a small private pond where it will thrive, and where it can be observed.

New Education and Information Director



The Fish Commission recently appointed a new director of the Office of Information, Ms. Cheryl Riley. The change has brought a new name to the office - It will now be called the Office of Education and Information.

Ms. Riley is formerly education projects coordinator for the Missouri Department of Conservation. She earned a bachelor's degree and a master's degree in journalism from the University of Missouri-Columbia. She was director of

publications for the Missouri Osteopathic Association and a journalism instructor at Columbia College in Columbia, Missouri.

As education projects coordinator, Ms. Riley edited, designed, and coordinated outdoor education instructor materials for Missouri teachers and youth leaders. She was also responsible for developing a national award-winning outdoor ethics program, and was conference director for the 1985 National Outdoor Education Conference.

"The Pennsylvania Fish Commission is well-respected across the country," Ms. Riley said, "and I look forward to working with the staff to emphasize education in our programs. It is always important to keep the public informed, but we must look to the future. Educating youth and adults about Pennsylvania's aquatic resources helps ensure that there will be clean streams and quality fishing opportunities for our children and grandchildren."

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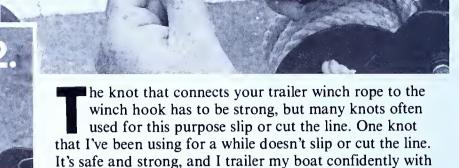
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A Strong, Reliable Winch Knot

by Art Michaels
photos by the author



it. Here's how to tie this knot.





- 1. Bring the rope through the hook eye from behind.
- 2. Make three underhand turns.
- 3. From behind again, draw the rope through the loop at the hook eye.
- 4. Thread the rope through the second and third underhand turns, and draw the knot tightly closed.
- 5. Under way the knot is very strong, reliable, and safe.



You have a fishing friend in Pennsylvania



Straight Talk

THE CASE FOR SEPARATE IDENTITY

Pennsylvania is the only state in which fish and wildlife agencies are separate. They are both independent administrative agencies, not under the governor's jurisdiction, and were created that way. In 1962 and 1972 (as well as a few other times many years ago), efforts were mounted, usually by a few members of the General Assembly, to look at the feasibility of merging the two agencies. Formal studies have been conducted by the Wildlife Management Institute for the Joint State Government Commission, and because the present system is working well and no significant savings could be realized, such efforts at merger have faded away.



Ralph W. Abele
Executive Director
Pennsylvania Fish Commission

Bigness does not imply efficiency, and that tenet has been proven again and again, not only in government but in business. The Pennsylvania Federation of Sportsmen's Clubs has gone on record, not only in its bylaws but several times over the years, the most recent of which was on September 21, 1986, as opposing any efforts to combine these two agencies.

In March of 1972, the Pennsylvania Fish Commission reiterated its long-standing conviction that specialized service is best performed by specialists.

"Whereas, the Pennsylvania Fish Commission was formed by an Act of the Legislature on March 30, 1866, for the specific purpose of halting the pollution of the rivers, lakes and streams of the Commonwealth and for the protection, propagation, and management of the fisheries resources; and,

Whereas, For more than 100 years the Pennsylvania Fish Commission has employed a highly trained staff of biologists, fish culturists, engineers, law enforcement officers and administrators, to carry out its mandated programs and objectives; and,

Whereas, The science of fisheries management, propagation and protection is a highly specialized field which cannot be duplicated by any other group or organization; and,

Whereas, the Administration of boating laws, rules and regulations, along with the design and construction of facilities, navigational aids, and other programs to regulate, insure the safety of, and provide for the needs of citizen boaters requires a high degree of specialized knowledge; and,

Whereas, The differences between the protection and management of fish and waters and the other natural resources of the Commonwealth are so great that it would be impossible to educate, train and develop management skills in any single group which could effectively carry out a general natural resources, or fish and wildlife management, conservation program; and,

Whereas, An independent study made by the Wildlife Management Institute, a highly qualified private organization composed of impartial natural resource professionals, for the Joint State Government Commission in 1962 clearly showed there would be no significant savings and no improvement in services provided to the sportsmen and general public by merging the Fish Commission with any other agency of state government; and.

Whereas, The program and services provided by the Pennsylvania Fish Commission to the public of this Commonwealth are nationally recognized and have attracted an increasing number of nonresidents to visit our state because of the quality of fishing and boating opportunities to be found within our borders;

Now, Therefore, Be It Resolved, That the members of the Pennsylvania Fish Commission, in formal session assembled, on this 30th day of March 1972, hereby express their unanimous conviction that this Commission, its staff and employees should remain, according to law, an independent agency of state government; and that no useful purpose or improvement in service could be served by merging the Pennsylvania Fish Commission with the Pennsylvania Game Commission or with any other agency of government...."

There is a singularity of purpose throughout our entire operation that is seldom seen elsewhere. Despite great internal diversification throughout each bureau, division and section, the product of service to Pennsylvania and its visitors has made the Pennsylvania Fish Commission a model operation, admired, respected and envied throughout the entire United States and Canada.

Fælk W. Dhele

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The Keystone State's Official Fishing Magazine

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The cover

This issue's front cover, photographed by staffer Russ Gettig, shows a brown trout just caught by an angler in a Centre County stream. If you feel like enjoying similar action, check out the article on trout fishing that begins on page 9. Furthermore, the information beginning on page 4 could help you enjoy your fishing even more than you do now.

A Custom-Built Rodin Your Future? by Art Michael

realized some provocative facts the other day while I was thinking of four fishing companions. The combined number of fishing rods they use most often is 21, and of those 21 rods, 12 are custom-built. What's more, two of these anglers build their own rods.

It occurred to me that year after year as my angling partners became more accomplished fishermen, they required more specialized, personalized equipment. A custombuilt fishing rod now helps them be more successful anglers because of their rods' specially crafted characteristics. Those same qualities make their fishing with custom-made rods more enjoyable.

If you fish often and don't yet use a custom-made rod, I'll bet it's only a matter of time before you do. If you are thinking of joining the fraternity of anglers who use custom-made fishing rods, here are ideas that could make your initiation into this new world of fishing enjoyable.

Consider first that, like two of my fishing friends, you don't have to make a rod yourself to own a custombuilt stick that you're delighted to use. These days, building rods is an increasingly popular hobby for many, but for some, it's an art—and a livelihood. There are professional custom rod builders who guarantee their work, and they offer their services at reasonable prices. Furthermore, the best rod builders I know are also angling experts who know our fishing rod needs very well.

You can probably find a custom rod builder close to home. But shop around a little to find the builder who shows you the credibility you should demand, the skills you want to see, and the price that makes you smile.

Make initial contacts first by asking in bait and tackle stores, and when you chat with a rod maker, ask for references. The best ones can give you a long list of happy customers. Ask to inspect samples, too, and try out a few rods.

Next, you and the rod builder will

want to discuss in detail the kind of fishing you do, where you do it, when, the kind of reel you expect to use with your custom-built rod, line strength, and so forth, so that the rod maker can suggest blanks and components. Tell the same information to a variety of rod makers, and then compare notes.

Ask lots of questions, too. Find out why a rod builder recommends certain blanks and components, and check out the answers with other builders and fishermen.

When you decide on what you want, get prices and compare again. Then choose your rod builder.

n my case, the rod maker picked me. My father's hobby is building rods, an avocation he began about 12 years ago.

For his very first custom-built rod, he bought some supplies and for the most part used tools he already had at home. He read a book or two, decided what he wanted to build, bought the components, and started his project. His introduction to building rods was easy and inexpensive.

Funny thing about his first homemade rod. It's a 6½-foot light-action fiberglass spinning rod that he made for me and for the kind of fishing we frequently enjoy. That rod is now over 12 years old, and I've hauled in hundreds of fish with it, the largest of which was a 15-pound catfish that put up a half-hour battle.

That rod is still in the same rocksolid shape it was the day he gave it to me. And you know what? It's a constant companion on all my fishing trips. That very first rod-building try is responsive and well-balanced, and I wouldn't dream of fishing without it. Remember—this gem was his first rod building effort!

Since then, my father's skills have grown increasingly polished and his creations have become more and more perfect. He's added a few more light-action spinning rods, ultralight spinning rods, casting rods, and fly rods to my collection, and he's created

other masterpieces for me that I asked him to make. No wonder why I fish only with his custom-made rods!

As you can see, one way to become the owner of a custom-built rod is to find a craftsman to build it for you. An even more attractive alternative is to make a masterpiece yourself, as my father did on his first attempt.

uring the last 20 years or so, growing numbers of fishermen have built their own rods because our sport has been characterized by greater angler sophistication and know-how. These increasingly skilled fishermen wanted rods made from blanks with tips, mid-sections, and butts that had unique qualities. They needed rods with freshly designed guides made of new materials that could outperform the choices on store shelves, and they wanted these guides placed on blanks with micrometermeasured precision. They also demanded special-purpose, redesigned reel seats. They required rods that could be used in more sporting and specialized ways—lighter tackle for bigger fish, for instance, and rods for use in specific fishing circumstances.

In short, their new-found fishing let them advance to personalized rods that could meet their new technical requirements and higher angling expectations.

During this same 20 years, component manufacturers and firms that sell rod building materials responded to the changing needs of fishermen. That's why excellent instruction books, pamphlets, cassettes, and video tapes are now widely available, and many rod builders themselves will help you. You can even take courses and seminars in rod building.

So today, you can get all the help and technical advice you need to build your own rod. In fact, many fishermen have learned that they can build a terrific rod without spending years honing their skills and without going through hours and hours of special training and practice. Preliminary results of the Pennsylvania Angler reader survey, which appeared in the September 1986 issue, show that about 39 percent of the respondents use at least one custom-made rod, and some 16 percent build their own rods.

A ll in all, if you've never before built a rod, and if you want a custom-made gem, you can do it, and now is a good time to learn how.

Of course, your first homemade rod may not be a Michelangelo, but it can be serviceable. In fact, you may still be using it regularly 12 years from now, as I use my father's very first effort.

Consider also one practical advantage of building your own rod — the price of making a top-quality rod with components you buy separately or in a kit is much lower than the cost of the same rod that you could buy in a tackle shop or from a mail order firm.

So if you want to build a rod but you're new to this craft, read some books, seek other instruction, get some components, and go to work on your very first personalized masterpiece.

Fly rod anglers who learn to tie flies know the pleasure of catching fish on their hand-made creations. Lure makers know the same good feelings, too. You can have that same satisfaction when you catch fish on a rod that's been specially made for you, or on a rod that you yourself built.

Art Michaels is editor of Pennsylvania Angler and Boat Pennsylvania. He uses five or six fishing rods regularly, each of which is custom-made.



A professional rod maker can create a masterpiece for you, and with a little practice, you could build your own Michelangelo. What a pleasure it is to fish with a custom-made rod!

Tips for Late-Fall Walleye by Darl Black photos by the author

t one time, Labor Day signaled the end of the fishing season for me. Every September when I was in grade school my outdoorsman father said, "When the school bell rings in the fall, it's time to put up the fishing tackle until next spring." I followed that advice for many years, believing that fish did not bite in the fall. Little did I realize that his saying was only a ploy to keep me cracking the books and away from the river. He knew what would have happened to my studies if I had kept fishing once school started. At least he got me through high school in good standing.

However, college encourages you to be inquisitive and to formulate your own opinions. Well, questions and observations led me to discover that some of the finest fishing occurs in the fall. Although this idea may not have been the track my professors had in mind, it sure has rewarded me over and over in the years since college.

Hanging around with the late-fall fishing crowd taught me more than I could ever learn by just fishing in the pleasant weather of summer. I quickly discovered that one of the best fall bets is walleye, particularly from mid-October through ice-up. It was hard to believe that a fish many anglers

worked so hard for in the summer was so readily available in the cold waters of late fall.

Then as now, the best way to learn about catching fall walleye is doing it. Many anglers try fishing for walleye into October and November only to come away disappointed. Often the lack of success can be attributed to applying spring or summer techniques to fall walleye. That is like trying to play a round of golf with only a putter: it doesn't work very well.

With this in mind, here are tips to help you tilt the odds in your favor for late-fall walleye fishing.

As the water cools in the late fall, impoundment walleye take up new positions. In lakes, walleye will be found on steeper dropoffs than during the summer. Seek out nearvertical slopes on mid-lake humps, as well as the inside turns on shoreline points. On reservoirs located in hilly or mountainous country, look for areas of bluffs and banks with rubble. If the reservoir is in a lowland area with lots of shallow water and little bottom change, check the outside bends of the submerged river channel; this spot is generally the sharpest drop into available deep water.

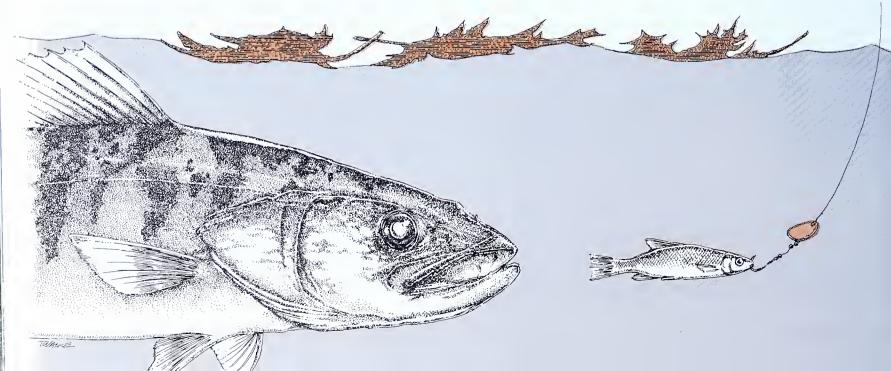
In rivers, walleye drift away from summer riffle patterns into

deep pool patterns. The fish take up feeding positions on current breaks near deep water. If the rivers are flowing extremely high, creating too strong a current, you may find walleye on gravel bottom areas in backwaters. But when the water starts down, the walleye head for the pools once more.

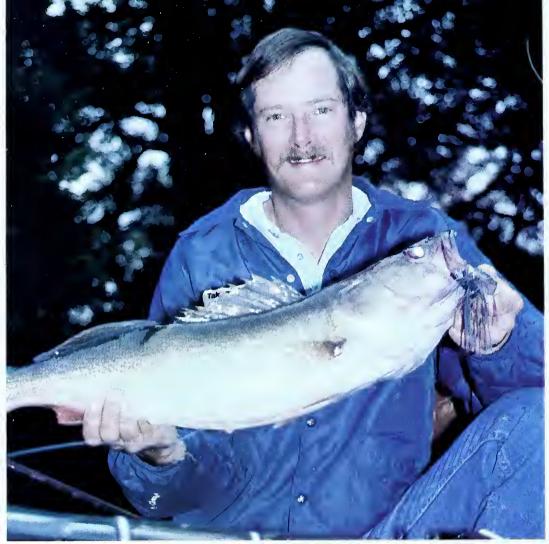
River walleye in great numbers are also attracted to the stretch immediately below dams. Walleye congregate in the tailrace as soon as the water temperature cools and fall rains raise the water level. Sites below dams that were too shallow during the summer will now hold walleye.

In most waters, fall walleye gorge themselves on gizzard shad or young-of-the-year yellow perch and crappies (yes, crappies). If you locate areas holding schools of one of these fishes, chances are excellent that walleye are nearby, even if the fish are not feeding when you are there. Be sure to check these spots several times during the day. Walleye may put on the feed bag for short periods several times in 24 hours.

When lake levels rise with autumn rains, expect the walleye action to rise also. Look for current situations in reservoirs to pull in feeding walleye. Current exists even in impounded waters: streams, rivers,



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and run-off ravines push water in the impoundment; open gates on the dam pull water out. Current is most noticeable in narrow sections of the reservoir, or where the submerged river bed takes a sharp change in direction. Pay special attention to bridge areas at causeways.

Nightcrawlers and leeches, two effective live baits in the warm water of summer, slip way down on the walleye's preferred food list by late October. It's an old adage: in the live bait category, baitfish produce better in cold water than terrestrials, worms, leeches, crayfish, and other aquatic baits.

When the water temperature drops into the 50s, successful live bait anglers switch to shiners, chubs, suckers, and large fathead minnows.

Bait shops frequently close for the winter just when the late fall angler needs large live minnow baits. Even if a shop in your area remains open, the supplier rarely has the size desired for late fall walleye. You may need to invest some time in collecting your own bait.

For the live bait angler, a minnow trap takes on as much importance as does the best fishing rod. If your trap is new, you need to get rid of the shine by letting it sit outside to weather for

Bob Hornstrom fooled this 9-pound walleye in five feet of water near the outside bend in a submerged creek channel of a shallow reservoir.

a period before attempting to catch baitfish. Bait it with a homemade doughball mixture, and slip it in a pool with an undercut bank on a small brook near your home. Be sure you have the trap secured with a strong line, and that your name and address are affixed to the trap as required by law.

Trolling plugs is the least effective presentation for fall walleye. Forward trolling presents the lure at a pace too fast for these fish. This is not to say that artificial baits do not catch fish in cooling water. They certainly do when retrieved at a speed that the walleye are willing to chase down, so cast and work the baits with a moderate to slow retrieve.

One of the most effective presentations for late-fall walleye in lakes and reservoirs imitates injured or dying baitfish. Wounded baitfish struggle to stay with the school, then drop toward the bottom only to struggle toward the surface and fall downward again. These injured baitfish make an easy meal for walleye that tag close behind

the school of forage.

Yo-yoing jigging spoons, sonar-type lures, jigheads with Sassy Shads, or sinking vibrating crankbaits such as the Spot, create the dying baitfish effect. These lures are worked directly under the boat at depths of 15 to 50 feet.

Day in and day out, the best cold-water presentation for walleye of all sizes in rivers as well as impounded water is the jig-n-minnow. Although it is referred to as the jig-n-minnow, it is more appropriately described as the bucktail jig and chub; or the 3%-ounce black bucktail with 5-inch red-tailed chub, to be most specific.

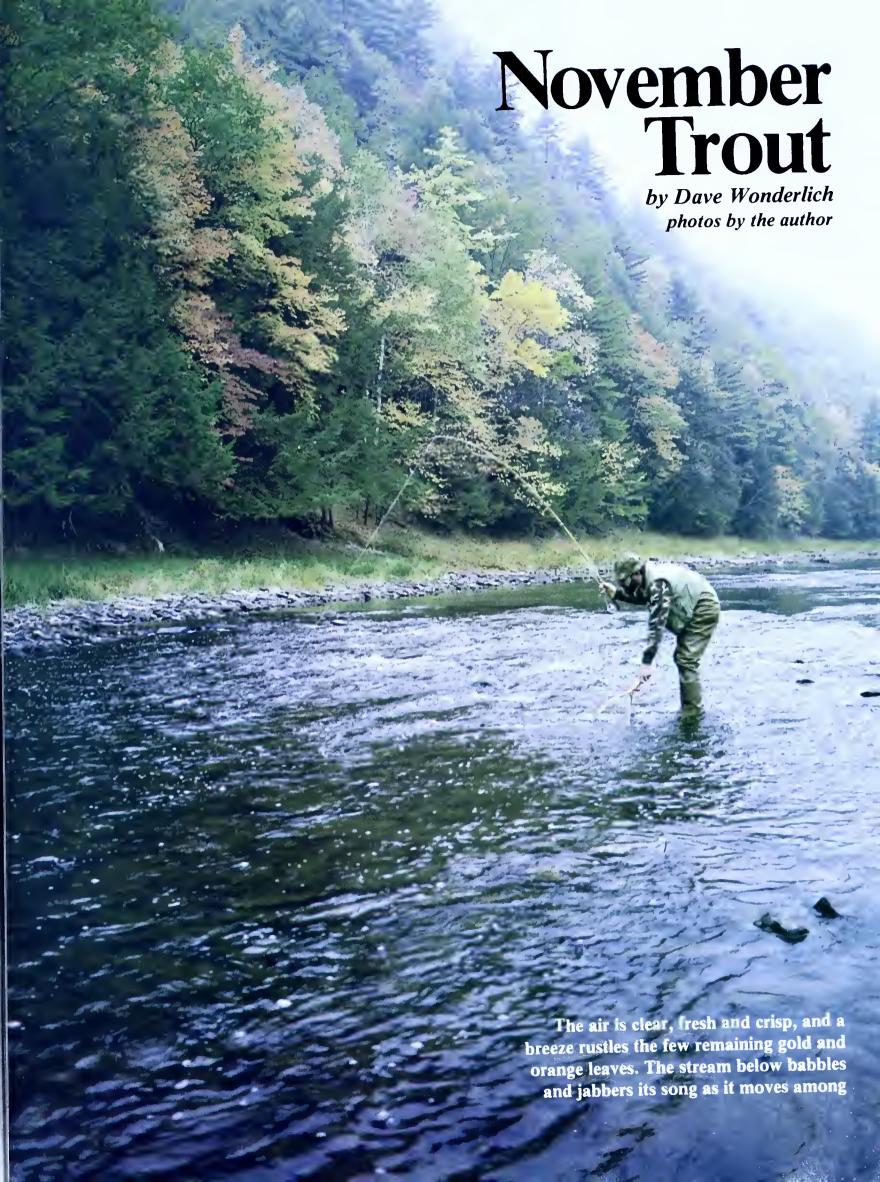
Suckers hold the second place slot if you don't have chubs, with 3-inch fathead minnows the third place pick. Shiners bring up the rear because they are frail and do not hold up to repeated casting without tearing off.

Once the jig-n-minnow has reached bottom, the retrieve should be a 6inch hop with a 3-second pause, with the hop and pause repeated all the way in.

Think deep for numbers and think shallow for trophies. This may sound like double-talk, but it is not. Remember that lake walleye tend to relate to steeper structures relative to the depth and make-up of each impoundment. I have caught many walleye in November as deep as 50 feet on certain waters. For an average depth, I would recommend 15 to 30 feet for concentrations of schooled fish.

Verifying my experience with other fall walleye anglers, all agree that the biggest hawgs of the fall are more likely to come from water only a few feet deep. This is not an absolute situation, and the shallow spots where these fish are taken will be very near a steep deep-water dropoff, so you should not stray far from these structures.

It would seem that big walleye—those over 7 pounds—are prone to prowl shallower water in the fall than the young and middle-aged school fish. There are theories we could put forth that may tend to confuse you as they do me. Suffice it to say that trophy walleye are big enough to go wherever they want, whenever they wish; in the fall, they frequently go shallow.



dry rocks and boulders. An angler steps carefully from the bank to a shallow gravel bar, his nymph floats through the air then plops to the head of a run. The line floats with the current, then pauses, the angler strikes, and once again his rod bounces with life. There wasn't another fisherman on the stream that day, no one else to share the dozen or so caught and released browns and rainbows, no one else to try for the rest of the trout that were looking for a meal.

Not far away, orange-clad hunters can be seen working their way through the woods for turkeys, grouse, and squirrel. Below the hunters, Little Pine Lake seems to rest from its summer visitors, while beneath the surface freshly stocked trout prowl for their daily dinner. A few boats bob on light waves as anglers work spinners, bait, and flies to catch their extended season limit. Only our voices, splashing trout, and the occasional sound of distant shotguns break the silence and solitude of Little Pine.

That is the way it usually goes in November; beautiful scenery, exhilarating air, plenty of fat feeding trout, and deserted trout waters. Trout fishing in November can be the best of the year. Aside from the lack of fishermen, which means all the best holes and stretches are there for you without interruption, the trout are back to their feeding habits. Fishing the summer months in many of our larger freestone and limestone streams means nighttime angling; this is when the water cools enough to give the lethargic trout energy to feed, and the darkness gives cover so the trout feel safe in revealing themselves in the low water.

Fall drops the water temperatures, allowing trout populations to redistribute throughout the stream, back into the runs and riffles you found them in last spring. They no longer need to be deep in spring seeps for oxygen, they can cruise the surface in the long pools for spent flies or terrestrials, they can chase minnows in the shallows, and they can root for aquatic nymphs when and where they please. All this makes trout fishing "business as usual" until very cold weather sets in.

November provides the



This angler caught a nice rainbow trout in Clinton County's Fishing Creek.

opportunities for two types of trout fishing—angling for big breeders, and fishing for feeding trout. You don't have to go to Montana to catch the big trout that show themselves over spawning beds during November. Pennsylvania trout are spawning in November on many of our streams and can be located by the careful observer. The angler must walk carefully along the bank, quietly and behind cover if possible, and watch for the pair or group of trout. Polarized sunglasses are a necessity to reduce the glare. Spawning stations are different from feeding locations.

The trout will be in shallower open water to spawn. They spawn in moving water or riffles with thumbnail to walnut-sized gravel. They don't feed while spawning, but the male will strike at intruders to the spawning bed. You must provoke a strike. Size 6 or 8 streamers such as sculpins, muddlers, or wooly buggers make them hit.

Many anglers take advantage of this big trout fishing throughout the United States, but it is only done in token numbers in Pennsylvania. It is very exciting fishing, but the pursuit of spawning trout should only be done with the highest ethical regard. Most headwater trout streams are closed during the extended season, thus putting our more fragile streams off limits. Our larger streams are under the three-trout limit, and special regulation areas further protect the fishery. Three trout may not sound like many to take, but three spawning hens can mean a lot of young for the future. Hunt for the spawners, enjoy locating trout you probably didn't know were there during the regular season, and try catching them. When you do connect on a strike, play the fish quickly, and if it is a hen, release it. Take special precaution when wading, stay out of the spawning areas so that the fish aren't spooked away and the nests destroyed by a heavy boot. Putting back the spawners is a matter of the ethics of the individual angler, and it is also the act that will help provide more fish and conserve the wild natural state of our Pennsylvania streams.

Stay away from the spawners? I don't think so. Our streams and fish need as many friends as they can get. If an angler experiences the great fishing the November spawners will provide and does it with reserve and care, he won't hurt the stream, and I'll bet the trout get a convert who is willing to write letters, make phone calls, and be heard when interest groups threaten the fishery. Fishing for spawners is an opportunity for both the trout and the trout fisherman.

The basics of fishing for spawners are easy. They involve hunting the moving water for the trout, then a careful approach and presentation. The water at this time of year is usually very clear and on the low side. If you make a wrong move, you'll spook the fish. Make your cast well away from the spawning area, and be sure there aren't any fish where you plan to wade. Cast well above and beyond the trout, then begin stripping line to bring the streamer flashing to the side of the nest. If you don't scare the fish with your presence, the big male should lash out at the intruder. Spinners and lip-hooked minnows work just like the streamers. Barbs should be pinched down on the hooks for better hooking quality and fast release of the trout.

The water is usually low in

November, feeding stations will be in deep pockets and washtub-sized eddies on smaller streams like Cedar of Slate Run, and in locations where riffs or runs filter food into deeper water on larger streams like the Lackawaxen or Big Pine.

Occasionally trout feed in the shallows, but their primary feeding station will usually be in a little more depth where there is a greater quantity of food.

Smaller lures are the rule with the C.P. Swings and Mepps spinners excellent for trout. Worms and minnows work too, although strikes come harder with these when the water levels are so low. Fly fishermen can fish the Jassid in size 18, grasshoppers, crickets, ants (amber and black), and tricos in sizes 22 to 26, Baetis or blue-winged olives in size 18, Diptera (midges) in sizes 20 to 28 in white, grey, yellow, green, and black, Isonychia in size 14, ginger caddis in size 16, and streamers such as buggers, sculpins, coachmen, and muddlers.

Good wet flies include Quill
Gordons in size 16, Royal Coachmen
in size 16, a size 14 Adams, and
Hare's Ears in size 16. Anglers who
fish limestone runs will find trout
feeding on blue-winged olives, sow
bugs, and shrimp. More mountainous
limestone water like Penns Creek and
Fishing Creek will have greater
quantities of mayflies with more fish
taken on the first list of imitations.

November provides good nighttime fishing until the weather turns cold. Good night wet flies include the Professor, Royal Coachman, and Heather Moth in sizes 4, 6, and 8. The big streamers mentioned above also work well at night along with the Mickey Finn, white marabou, and bucktail. A good crayfish imitation may work the best of all. I like an orange wooly bugger with a big orange marabou tail, body palmered with badger hackle (size 6). The lure fisherman can do well with typical surface bass lures such as poppers and Jitterbugs. Crickets and grasshoppers wiggling on the surface after dark bring explosive action for the bait fisherman.

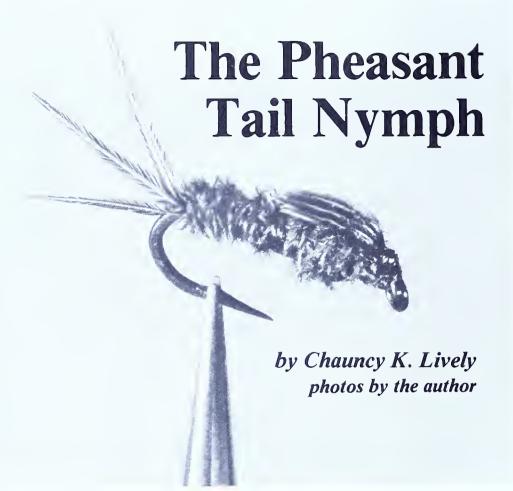
Stream fishing for feeding trout is easiest and most productive after a good rain. Food is washed into the stream, water levels rise, allowing the fish greater area from which to feed, and the water is off-color to provide protection to the fish. All these characteristics of a rain-swollen stream are also good for the angler. The trout feed with abandon on the increased food supply, they are less spooky because of the off-color water, and they are less picky about what they strike because there is such a variety of food available. The angler can use larger flies and lures, and the bait fisherman gets a chance for fast action. Offerings drifted through feeding runs produce good catches without having to make long casts or being particularly quiet. November trout anglers wait, and not always too patiently, for a stream-raising rain.

Lake fishermen find most of their favorite trout impoundments well-stocked for the coming ice fishing season. The same tactics, bait, and imitations that are used for opening day work well for these freshly stocked fish. The lures, bait, and flies mentioned above take November trout from Pennsylvania's stocked trout lakes.

For equipment, I prefer to go light because the water is usually low and clear. I like a 12-foot leader tapered to 7x or 8x for all my fly fishing but the streamers and wets, and for the underwater bugs I go to a level leader of mono in 4-pound or 6-pound test. Six-pound is excellent for night fishing. For the spinning gear, I like the 4-pound line, although I have been using more 2-pound lately and enjoy the light line challenge on spinning gear that was usually saved for the fly equipment.

Whether you are fishing a stream or lake, the water is cold. If you develop a leak in your waders or fall in, dry off and get into dry clothes immediately. Hypothermia can strike fast when an angler is wet in the chilling fall breezes. If you are in a boat, wear a PFD. Having one in the boat will not help you in the water if you can't get to it. Fish with a friend for added safety.

Fly enthusiasts, lure fishermen, and bait anglers can all enjoy the varied trout fishing available. Join the anglers who are taking the opportunity that November provides to catch solid, beautifully colored trout while extending trout fishing enjoyment in fall's finest weather.

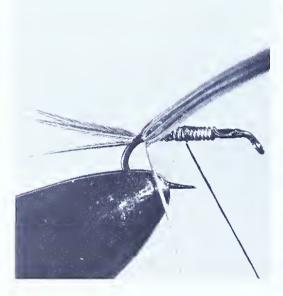


The late Frank Sawyer was river keeper of a stretch on the Avon, one of England's famous chalk streams. There he developed a keen interest in the river's subaquatic insect life and subsequently, nymph patterns and specialized techniques in their use. He met G.E.M. Skues, England's pioneer in nymph fishing, when the latter was near 90 and the two became fast friends. Although they shared a strong common interest, their approaches to nymph fishing were quite different.

Skues paid close attention to trout lying just beneath the surface, taking nymphs drifting inertly in the current. He was also interested in emergent nymphs struggling to break through the surface film, a time when nymphs are extremely vulnerable to trout. Thus, Skues'thrust was nymph fishing in the upper layers of the stream's depth. His principal proving ground was the Itchen River, whose placid surface was endowed with a particularly tough film that prevented emerging nymphs from breaking through without great effort. In the clear water of the Itchen he was able to observe



Secure a wet fly hook (size 16 shown) in your vise. Tie in black 6/0 prewaxed thread behind the eye. Tie in fine copper wire at the thread tie-in. Wind the thread back to the bend and follow with the wire.



Wind the thread forward over the wire to the mid-shank. Select three reddish-brown fibers from a pheasant tail feather and tie in the tips with two turns of wire to represent tails.



Entwine fibers around the wire and wrap both forward to form an abdomen. Tie them off at mid-shank and trim the excess fibers. Then tie in six more fibers by their tips, as shown. Trim the excess tips.



with ease both the struggling nymphs and the reactions of trout.

Sawyer was also interested in the nymph-feeding habits of upper-level trout, but in addition, he probed the depths to find the stream's largest trout. He was said to have possessed extraordinary eyesight and could detect the solitary leviathans that lie in the security of deep holes, casually picking nymphs from the weeds, rooting on the bottom, or taking deep-drifting nymphs.

Sawyer's Pheasant Tail Nymph was designed to accommodate trout feeding at all levels. With controlled leader tension the nymph could be made to swim near the surface; yet, the design was such that when cast with sufficient slack in the leader it would sink quickly to lower depths. Two features in the pattern's dressing made quick entry through the surface film and fast sinking possible: an underbody of hairlike copper wire added a little weight, and the absence of hackle eliminated the appendages most likely to impede quick descent.

Sawyer's Pheasant Tail dressing

specified the use of the finest copper wire—about the thickness of a hair—to be wound as the nymph's underbody. It is a wire used in the electronics industry and it is often supplied in a bright red color. For Sawyer this wire served several purposes. In addition to forming the underbody, he entwined it with the pheasant tail fibers before winding the abdomen, strengthening the fragile strands. In the latter procedure the color and flash of the wire showed through the flue of the fibres, an effect he felt gave the illusion of translucency. Sawyer also dispensed with tying thread and instead utilized the wire to tie in the materials and to finish off the fly.

Sawyer's ultrafine wire is not readily available to everyone, so you may use the thinnest copper wire you can find and employ black tying thread conventionally to secure the wire, as shown in the photos. A discarded lamp cord is a good source of relatively fine copper wire. It is multi-stranded, and a 12-inch length yields enough wire for several dozen Pheasant Tails. This wire is generally a natural copper color—not red

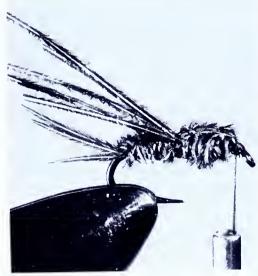
as in the original dressing—but this will not diminish the effectiveness of the nymph.

The pattern's pheasant fiber tails lack the durability many of us like, but sturdy substitutes are easy to find. Two examples are mink guard hairs for size 16 and smaller, and fine, stripped hackle ribs for larger sizes. These may be dressed conventionally, following which the body fibers are tied in at the base of the tails.

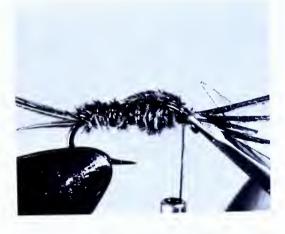
The Pheasant Tail Nymph may be dressed in virtually any size you choose, but my own favorites are sizes 16 and 18. It does not represent any particular species of mayfly, but it bears a general resemblance in form and shade of coloration to many dark nymphs found in healthy trout streams everywhere. Nor is its effectiveness limited to the chalk streams. Walt Siefried, a professional fly tyer of Pittsburgh, uses the pattern extensively and it's his favorite for Cross Forks, the pretty freestoner in Kettle Creek Country. My own experience mirrors Walt's, both in slackleader upstream work and fished across and down as an emerger.



Wind wire in several layers to form a swelled thorax. Then wind the fibers over the wire to the eye and tie them off with wire. Trim the excess fibers.



Pull the fibers back over the thorax and bind them down behind the thorax. Then, in spaced turns, wind the thread over the thorax to the eye. Cut or break off the excess wire.



For wing case, pull the fibers over the thorax and tie them off behind the eye. Trim the excess. Finally, wrap the head, whip-finish, and apply head lacquer.



Winter Storage for Fishing Boats

by Gary Diamond

ake a good look out the window. The leaves have fallen from the trees, temperatures now hover near the freezing mark, and those blustery north winds are threatening snow—not a time to think about fishing at the lake. At the end of the driveway sits your faithful boat, which provided you with lots of exciting fishing during the warmer months. Sure, it needs a bit of sprucing up, but you figure it can wait a few more weeks, at least until the first frost hits. Who knows, there's always the possibility of a few more warm days coming before Christmas and you could get in another day of fishing. Besides, football season is in full swing and you wouldn't want to miss the game on Saturday and Sunday. The boat will just have to wait a few more weeks before it gets winterized.

When winter finally strikes full blast and the snow is a foot deeper than the boat seats, you could become somewhat concerned. But now, it's too cold to go outside and work on the boat. According to boat and motor dealers, this kind of logic is often a costly mistake. Boats and motors that are not properly winterized are likely to have severe problems when you want to use them next spring. In fact, the majority of the mechanical failures dealers see are caused by owner neglect—not a manufacturing problem. Preventing these mechanical nightmares takes just one day of your time and costs less than \$20.

Cold and moisture are the two worst enemies of your boat during the winter months. There's nothing you can do to prevent either unless you can afford to move to southern Florida until spring arrives. Even boats that are stored in a garage suffer from the elements. The only difference is that it takes a little longer for the

damage to occur. The products you'll need to prevent these problems are a grease gun, a couple of tubes of lower unit grease, and a spray can of engine fogging oil. Tools required to do the job consist of simple hand tools that you normally carry on the boat for emergencies.

Outboard motors

If your boat is outboard-powered, winterizing the motor is easier than you might think. First, the lower unit oil must be drained and checked for water contamination. Normally, the oil is clear or dark brown, but if it appears foamy or light tan in color, there's a good chance water has leaked into the gear case. If water is present, this indicates a broken seal around the prop shaft. These tiny seals are usually constructed from one or two "O" rings that are held in place with a plate or a "C" ring and washer. Consult your owners manual for replacement instructions or take the motor to a reputable dealer to have them replaced.

After draining the gear case, replace the oil with factory recommended lower unit oil. This is done by filling the unit from the bottom drain hole until it runs out the top. The motor is in a vertical position to ensure that all air bubbles are forced out the vent hole. Both the drain and vent openings are flush-fitting screws located on the side of the gear case. The drain is at the bottom just above the skeg, and the vent is approximately six or eight inches above the drain. Both screws must be removed to do the job.

The next step is to remove the prop and check for monofilament line under the hub. It's not unusual to find gobs of line wrapped around the shaft, which can quickly cut a lower unit seal. To remove the prop, the cotter pin, which prevents the prop nut from coming loose, must be pulled from the shaft. Then the large nut can be taken off with the aid of a good-sized box or socket wrench. Be sure to remove all washers in the order they were installed. Place them on a clean surface and you'll know exactly how to replace them during reassembly.

Next, carefully unwind any fishing line and remove any dirt or grit by washing with clean water. Lubricate the shaft with WD-40 and reinstall the prop and washers. The prop nut should be tightened to factory specs, and be sure to replace the cotter pin with a new one made either of stainless steel or brass.

With the aid of a small grease gun, lubricate all "zirk" or grease fittings on the engine until the lubricant oozes out the opposite end of the area being lubed. You'll find these fittings on the steering arm, tilt pin, and center pivot shaft. Inside the motor cover, there are additional fittings on the shaft and throttle linkage. Any other areas on the motor that may be subject to moisture or corrosion should be thoroughly cleaned and sprayed with WD-40 or a similar agent.

The cylinders of any engine are vulnerable to moisture and corrosion. To prevent their seizing, they must be fogged with adhesive oil. The oil comes in a spray can and must be sprayed through the carburetors while the engine is running to be effective. You'll have to remove the air filter to expose the throat of the carburetors. Be sure to cool the engine by hooking it up to the garden hose with a flushing device while performing this task or you could damage the water pump and overheat the engine. Instructions for engine fogging can be found on the can of oil and also in your owners manual—be sure to follow them carefully.



Just about all your winter storage efforts are geared toward diminishing or preventing the effects of cold and moisture on your boat, motor, trailer, and other items. Greases,

fogging oils, and regular checks keep your equipment in good condition.

I/Os

There is very little difference in the operation of I/Os when it comes to winter storage. The engine should be fogged and the lower unit drained and refilled. However, most I/Os are cooled with a heat exchanger, which should be checked for the proper amount of anti-freeze. In fact, it's a good idea to drain the system completely at the end of the season and refill it with a 50/50 mixture of anti-freeze and water to be on the safe side. If you have a freshwater tank aboard, drain it completely or it will freeze, resulting in a ruptured tank and water lines.

Trailers

One of the most neglected pieces of boating equipment is your boat trailer. Whether it's galvanized or painted, your trailer needs protection from the elements during the colder months. The wheel bearings should be cleaned and repacked with high temperature, multi-purpose grease. Bearing buddies should also be cleaned and inspected for dirt or grit in the grease fittings before being reinstalled and lubricated.

Remove the tires and set the trailer on concrete blocks. The tires can then be protected with a coat of silicone spray and stored indoors, which will prevent dry rot. Clean all dirt and debris from the frame of the trailer and lubricate the rollers, coupler, and if your trailer has it, the tilt mechanism with a light machine oil. Clean all electrical connectors and lights with WD-40 and they'll be operational when spring arrives.

If the boat isn't kept in a garage, be

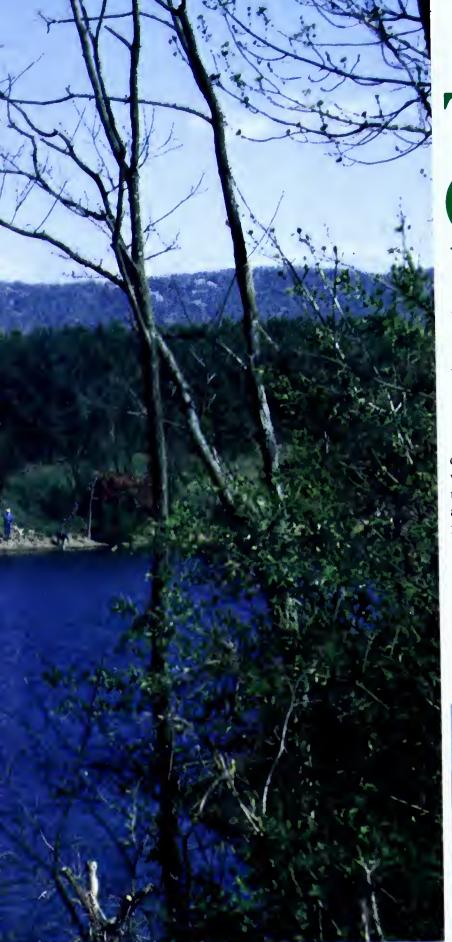
sure to cover it with some type of winter cover. Fitted covers look nice, but usually won't hold up when covered with several inches of wet snow. Most manufacturers recommend using a large tarpauline draped over a wooden frame with enough slope to allow snow to slide off. It's almost like placing the boat in a garage or tent.

By properly winterizing your boat and motor, you'll be able to head to the lake when those lunkers show up on the spawning beds. If you procrastinate and let the job wait until another day, there's a good chance you'll be facing a long delay in getting on the water and a huge repair bill next spring instead of hooking up with huge fish.

PA



The Fish Commission and working to



l organized sportsmen's groups have been ther since 1961 to create and maintain this Cumberland County waterway.

The New Opossum Lake

by Bill Porter
photos by the author

possum Creek Lake, Cumberland County, has had its ups and downs in its 23-year history. The biggest "down" occurred in the fall of 1985 with a complete drawdown for repairs to the dam. By May 1986, Opossum was back on line and trout fishermen were plying their trade as usual. Coolwater and warmwater fingerling species will be added on a biological timetable to provide additional species for fishermen down the road—make that: lake.

This is not too different from the original opening of the Fish Commission's lake on June 15, 1963. Actually, Opossum Lake's history goes back to 1961. According to Albert Day, Fish Commission executive director at the time, "The 60-acre lake, developed for warmwater fishermen by the Pennsylvania Fish Commission, was completed in 1961 at a cost of about \$190,000. The impoundment was designed and constructed by the Real Estate and Engineering Division as part of the warmwater management program."





Opossum Lake will provide a good warmwater fishery with an acceptable late fall, winter, and spring trout fishery.

Funds for the project were shared between the state agency and the federal Dingell-Johnson Act, designed to help the various states develop improved recreational facilities.

Nestled in a picturesque hollow of the Cumberland County countryside, the mixed woodland and pastoral scenery makes Opossum Lake an attractive area. Originally, largemouth bass were the first legal gamefish available for the 1963 opening. Muskies had been stocked as fingerlings and were in the 18-inch to 20-inch range by that June date. Three years later, legal muskellunge were caught as the huge predators took well to the new impoundment. A repeat performance with fisheries management of



the "new" Opossum Lake in 1986 is now under way. Musky fingerlings and other species will be planted and time will be needed for their maturity to legal size.

Events of 1985

A few spots of Opossum's history show that continuous attention was given to the lake management by the Fish Commission and organized sportsmen with the approval of the former. In 1972, there was a partial lowering of the lake's level to kill off some of the algae and other problem aquatic plants. This operation did assist the bank fishermen and helped reduce oxygen depletion by the plants from adverse weather conditions.

In the spring of 1984, Jim Rottmund, of Carlisle, headed a group from the Susquehanna River Waterfowlers Association to establish wood duck nesting boxes, mallard hatching platforms, and millet planting at appropriate sites. Wildfowl were attracted and the project was considered successful.

Also in April, an extensive Christmas tree project was completed for cover for fish habitat, particularly for the crappies. Bob Howe, Sportsman's Edge proprietor, and Perry Heath, Cumberland County waterways patrolman, cochaired the effort. About 400 trees were collected, bundled, weighed, and dropped into pre-determined spots. Poor ice that year necessitated the early April work with the trees towed to their locations, then weighted and dropped. Area businesses and sportsmen were involved in the work day. It was the first major project to improve a barren lake bottom for better fishing.

By this time, the lake had been established as a trout fishery with a put-and-take pattern. The addition of trout was started in the 1960s, not too long after the impoundment was open to fishing. The lake had also been opened for 24-hour use. However, as a result of abuse of the premises after nightfall, hours became 5 a.m. to 10 p.m., a pattern still enforced today.

Then it was 1985 and the first day of trout season. A newspaper report of that date said: "Opossum Creek Lake probably had the largest concentration of fishermen and boats of any area in the county." In addition to trout, three legal-sized muskies were caught that day and released. Four months later, the lake was in a drawdown process, starting a series of major events.

The drawdown and why

The first 6-inch plank was removed from the control tower on July 26. Weeks later, the bare bottom of Opossum Lake showed itself for the first time in 25 years. Repairs to the dam to stop seepage, cosmetic work at launch sites, stringing new mooring cable and dredging that area for better boat handling, and other work could be started.

But why drain Opossum Creek Lake in the first place? The draining followed a 1978 survey of the lake under the National Dam Safety Inspection Commission. At the time of the survey, some seepage was noted and additional observations and repairs were suggested.

Following the federal report, the Commission's Engineering Division conducted studies of its own to determine repairs needed. The Fisheries Management Section plus fish production personnel were also included in the planning. The job of angler safety, restriction at the work areas, and so on fell to the Southcentral Region law enforcement officers.

At no time did the conditions of the dam or the drawdown present any threat to the people and properties lying below it. A slow, controlled lowering of the lake kept the outlet stream at manageable levels to the Conodoguinet Creek. During this phase of the operation, Larry Jackson, area fisheries manager, and his crew made plans to salvage as many of the fish as possible. Plans for improving the fish structure on the lake bottom and restocking were developed at this stage. The target date for reopening Opossum Lake to public use was set for April-May 1986.

The best planning sometimes goes awry with Mother Nature creating the problems. Heavy rains in the southeastern part of the state necessitated the engineers' attention, working on a similar project there. Local heavy showers put more water back into Opossum and a serious illness of one of the key engineers created slowdown problems. Fish salvage planned for August now became a September target date.

Tracks criss-crossed the mud flat and an occasional carcass could be seen gleaming white in the ooze. Except for the cries of scavenging birds, little could be heard other than a sucking noise made as boots were pulled out of the mud gripping them.

No, it was not the set for a disaster movie. It was Opossum Lake in the final stages of the drawdown and the fish salvage operation was in progress.

Again Mother Nature had thrown a curve into the salvage schedule with a torrential cloudburst on Monday, September 9. Silt-laden water poured back into the lake, and the pond rose from about three acres to over five, making fish rescue operations impossible. On Tuesday, after additional draining and sediment settling, salvage began again.

Hip-deep mud hampered operations, but fish were drawn through the control unit into a trap basin on the downstream side of the dam. Fish were netted, loaded onto hatchery distribution trucks, and stocked in three nearby dams of the Conodoguinet Creek, which were capable of absorbing the additional fish. Over 800 largemouth bass and several thousand assorted panfish were saved, including crappies, bluegills, sunfish, perch, and catfish.

On the negative side was the loss of the musky population, white suckers and a few bass, trapped in shallow puddles of the lake's soft bottom. Rumors of 72-inch muskies ran rampant among area anglers. The facts of the matter put the largest musky at about 50 inches with a weight of 40 pounds—a very nice fish, indeed.

Jackson expressed reasonable satisfaction with the salvage.

"We hated to lose the muskies; but silt, high water temperatures, depleted oxygen, and crowding stress eliminated electroshocking and manhandling up the side of the dam—these would have been two additional stresses the muskies would not have survived," he said. "No salvage operation is perfect, but we do what we can—in this case, trout stocking is scheduled for next spring's fishing and the muskies and bass will be restored to the lake in proper sequence once it is at pond level," he said.

New boat ramps and more

On the positive side, work on new boat ramps, retaining walls, and other cosmetic work on the mooring line and parking areas continued through the fall into winter. Maintenance engineers from the Fish Commission's Bellefonte unit were busy with the improvements that included a new cement-plank launching site north of the primary boat launch area.

Work on the seepage problems made steady progress with free movement now possible over the dried lake bed. Rye grass had been sewn in the areas most likely to silt from fall and winter rains. Dredging along the mooring line was complete, and Ray Stickler, Engineering Division, indicated that things were now progressing nicely after variable problems since the drawdown.

Jackson and others of the Commission Fisheries Environmental Services Branch were making serious studies of the types of structures to be added to the lake bottom. Dave Wolf, Adopt-a-Stream coordinator, made contact with area sportsmen for help in the structure work. Final repairs on the dam were nearing completion in November.

A few late delays created by adverse weather and a series of inspections by the Fish Commission and the Department of Environmental Resources were needed before final approval could be given to refill the lake. A partial filling and redraining ensued before the lake was allowed to return to normal pond level in early spring.

Before the partial fill, the Carlisle Fish and Game Club with an assist from the Alumni Association of the Cumberland County Junior Conservation School, and individual sportspersons did a massive and skilled structure building operation under the guidance of Jackson, and Ron Tibbot and Dave Houser of the Commission Fisheries Environmental Services Branch. On January 18, 1986, with cooperating weather, over 100 well-organized people did the much needed job in one day's intensive effort. The Carlisle Club at its following February meeting adopted Opossum Lake, under the Commission's Adopt-a-Stream program.

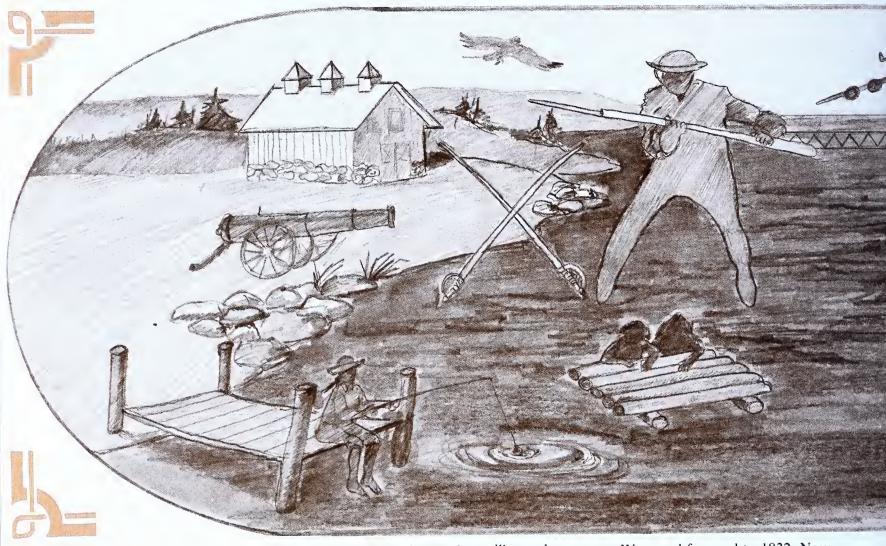
Eventually the lake was allowed to refill, but delay in February moved the opening of the lake's spring trout season to May 3, a couple of weeks after the regular trout season had begun. Trout were stocked before the opening with at least two additional plantings in the following weeks.

Jackson indicated that gamefish species and selected panfish and minnows would be added on a planned timetable to restore Opossum Creek Lake to a good warmwater fishery with an acceptable late fall, winter, and spring trout fishery.

The stereotype version of an opossum "playing opossum" can be cast aside for this Opossum (Lake) is once again active and well.

The Frankford

A look at the past, a glimpse into the future



f there could have been a video camera installed across the Delaware River to the east of us about 300 years ago, this is the way it may have looked here in Philadelphia. Let us put the power on and rewind to the 1700s.

We are in the midst of a 20-acre farm. There are woods and other farms along the river's edge. It is early afternoon on June 20th. The wooden farmhouse up there on the hill has a summer garden greening up to the right of it. To the left and farther back is the big barn made of field stone. The corn and wheat fields are beginning to look healthy. Cattle are resting under several shade trees. Down the sloping grade to the Delaware River is a dock, where a small rowboat bobs on its painter. A little boy is sitting out there with a homemade fishing pole and a bucket of worms. Another boy is pulling a

toy hand-made wooden sailboat along the edge of the water with some twine. Two pig-tailed girls are hanging onto a raft, which is drifting out to the end of the dock. Their parents are not in sight. A sailboat glides by.

One girl loses her grip, but before we can see what happens, we fast forward to 1775, the beginning of the American Revolution. Local authorities have asked landowners near the Philadelphia city dock to loan out their barns to store surplus cannons and other weapons. This barn sees lots of use as the war lasts eight bloody years.

Our camera races to 1812. The crumbling old barn is rebuilt. Now, three years later, the Congress of the U.S. passes an act that provides for the establishment of depots for munitions in various parts of the country. This 20-acre farm is bought and building is begun.

We speed forward to 1832. Now there are six stone buildings and two small workshops here. The barn is still one of them being used. The property to the south is bought, and another tract is acquired. The depot at this point has a total of 100 acres. It needs to be given a name, and because the part of Philadelphia right here is called Frankford, the "Frankford Arsenal" comes of age.

It's time to move ahead to the war with Mexico—1846. This arsenal again becomes an active storage and distribution center for ammunition, small arms, artillery, and cavalry equipment. War number three is looming ahead—the Civil War.

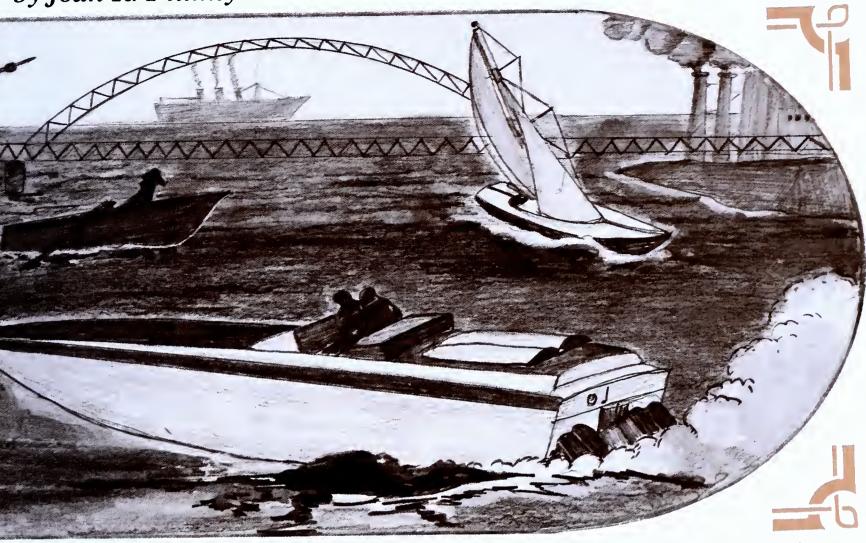
In 1861, the arsenal has powerdriven machinery installed to make percussion caps, bullets, and cartridges. This war lasts four years.

We push from pause to fast forward again to the beginning of the

illustration by Rose Boes

Arsenal Access

by Joan R. Plumly



Spanish-American War (1898). Research here now includes work on smokeless propellents and explosives. An underground firing range is built. It is still under that building (behind you). The arsenal is now an active military base, enlarged, having tight security. Foremen bring their families to live on the base.

Now we zoom through two more wars, world wars One (1914-1918) and Two (1939-1945). Ships, trains, and planes take the munitions made here to all the world's battlefields. The arsenal is getting tired.

We approach the 1980s. Our government has de-commissioned the arsenal. It is antiquated. The Pennsylvania Fish Commission is generously given a tract of 19 acres, most probably part of our farm of 20 acres right here that we first saw, for us to develop a boating and fishing access for the people of Philadelphia

and our state. We accept graciously and begin to plan a development schedule that will take a decade to complete. Right now we are in the midst of this process and we are into the fourth of seven phases that, when completed, will provide free, safe, and convenient access to the waters of the Delaware River for boating and fishing pleasure.

One last fast-forward, actually a double fast-forward, before we slow and pause. It is 1992. The dedicated men and women who have completed this major job have moved on to other tasks. We are thankful, for they have given us all this to be grateful for. It is again June 20th in the mid-afternoon. A small boy is out on the large fishing pier, casting his new carbon-filament rod into the rippling Delaware River. Another boy near him is directing his plastic boat to do zig-zags in the water with his remote

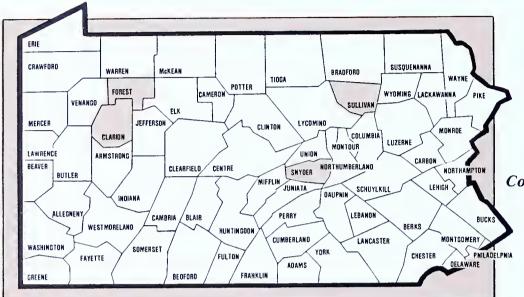
control. Two small girls are walking out onto the marina dock to get into their family's runabout—life jackets firmly cinched—as their mother and father follow with a picnic lunch. Both parents have taken a safe boating course and have instructed their children in basic boating safety. Everyone at the marina, as a matter of fact, has passed a safe boating course! The family will enjoy a carefree and fun-filled day on the water. We have come full circle on our video camera, but what wonderful changes and progress! We would have it no other way.

PA

Joan R. Plumly is a commissioner from Jenkintown. This article is adapted from her speech delivered at the Frankford Arsenal Access dedication, last June.

County Features

Sullivan, Clarion, Snyder, and Forest Counties



Here's where you'll find the best warmwater fishing action: Forest County, Tionesta Lake; Sullivan County, Hunters Lake; Snyder County, Penns Creek and the Susquehanna River; and Clarion County, the Allegheny River, Clarion River, and Kahle Lake.

Sullivan County

by George Osgood

Sullivan County is in the northcentral part of the state, between Bradford and Columbia counties. The best access and some of the best fishing is along Route 220, which bisects the county.

Hunters Lake

Hunters Lake is the largest Fish Commission property in the state and it's apparent that the Commission has used the fishery to full advantage. The 117-acre lake in southwestern Sullivan County is amply stocked with brooks, browns, and rainbows and holds fishable populations of largemouth and smallmouth bass and walleye, as well as panfish. To get there, follow Route 42 south of Eagles Mere for three miles and look for the Fish Commission signs.

The lake has a boat launch area and also offers excellent shoreline fishing. An electric-motor-only regulation is in effect. By Sullivan County standards, Hunters Lake gets heavy trout fishing pressure from April to June. The "second season" provides good angling from November through February.

Bear Wallow Pond

Secluded and small, Bear Wallow Pond looks like it should be 1,000 miles north of Sullivan County in the Canadian wilderness. As it is, it's remote enough. The 20-acre pond is on state forest land north of Hillsgrove. Take the Mill Creek Road out of Hillsgrove and turn at the Bear Wallow Road sign. The road ends at the pond.

Though the fishery is limited by the size of the pond, pressure is light. Largemouth bass, pickerel, yellow perch, and bluegills are plentiful.

The best bass fishing is around the pond's many stumps and other structure, while pickerel prefer the shade and cover of its eelgrass. Fishing is consistently good throughout the summer. The most popular bass baits include live shiners and blue, black, or maroon plastic worms. Johnson Silver Minnows with pork rind trailers are also favorites.

The pond has a primitive boat launch area and is offlimits to all but hand-propelled craft. There's also a small picnic area. Reports on ice fishing are few, largely because the forest roads leading to the pond aren't plowed in the winter. It stands to reason, though, that hikers or crosscountry skiers could find the effort necessary to reach Bear Wallow in the winter well-worthwhile.

Lovalsock Creek

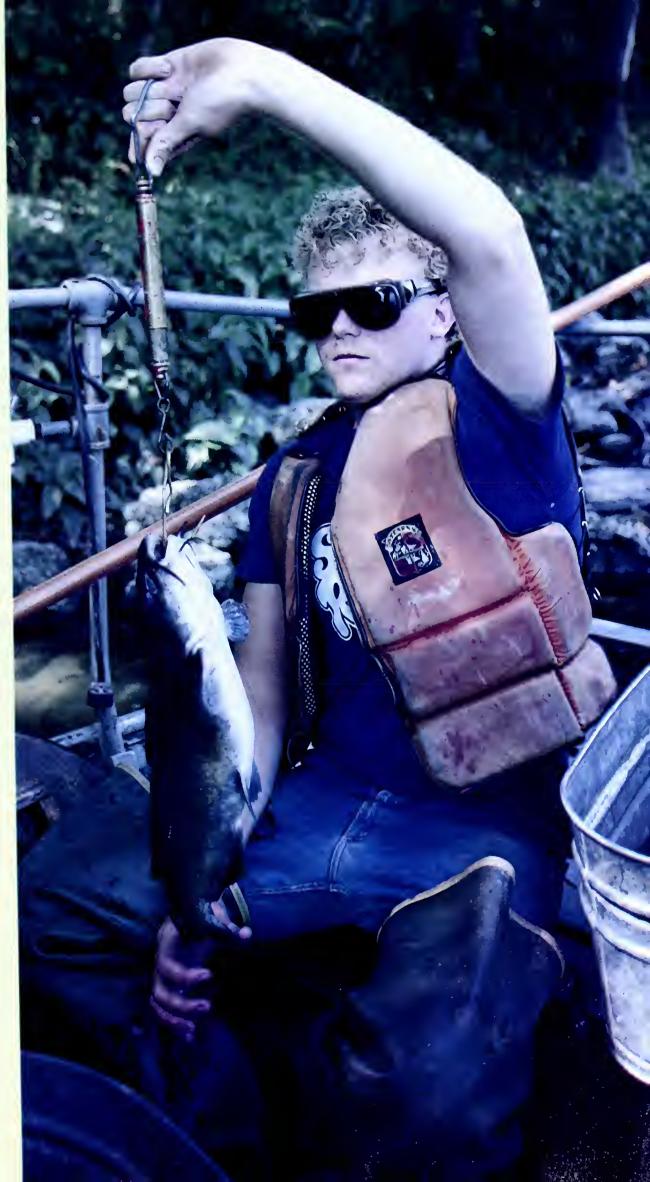
The 'Sock has a deserved reputation as one of the best trout streams in the state. "River" might be more apt than "stream" because the Loyalsock averages more than 100 feet in width and contains huge pools and long riffles. The creek runs along Route 154 or 87 for virtually all its 22-mile length, so getting to the water is no problem. It holds native brooks and browns and gets stocked each year. Some holdover browns pass the two-foot mark and run in the 4-pound to 6-pound range.

Boulders from big to mammoth provide most of the cover in the stream and trout take advantage of them, making for some challenging and frequently rewarding fishing. Spinfishermen using such traditional baits as minnows, worms, and salmon eggs or 1/16-ounce to 1/4-ounce silver-bladed Mepps or C.P. Swing spinners account for a lot of trout. Because of the topography of the

Angler County Features Series

This county features article is the last installment in the Angler county features series, which began over 21/2 years ago in the April 1984 issue. Here is an alphabetical list of all 67 Pennsylvania counties and the issue date in which each county was featured.

March 1985 Adams September 1986 Allegheny June 1986 Armstrong April 1986 Beaver May 1985 Bedford January 1985 Berks Blair May 1985 October 1985 Bradford May 1984 Bucks November 1985 Butler Cambria December 1985 Cameron March 1986 February 1986 Carbon Centre November 1984 January 1985 Chester November 1986 Clarion March 1986 Clearfield August 1986 Clinton October 1986 Columbia June 1984 Crawford April 1984 Cumberland July 1985 Dauphin Delaware August 1985 March 1986 Elk July 1984 Erie September 1984 Fayette November 1986 Forest Franklin March 1985 March 1985 Fulton April 1986 Greene June 1985 Huntingdon December 1985 Indiana August 1986 Jefferson September 1985 Juniata July 1986 Lackawanna October 1984 Lancaster Lawrence June 1984 July 1985 Lebanon January 1986 Lehigh April 1985 Luzerne August 1984 Lycoming February 1985 McKean June 1984 Mercer September 1985 Mifflin February 1986 Monroe Montgomery January 1986 October 1986 Montour Northampton May 1984 May 1986 Northumberland April 1984 Perry August 1985 Philadelphia Pike December 1984 Potter September 1986 May 1986 Schuylkill November 1986 Snyder September 1984 Somerset Sullivan November 1986 October 1985 Susquehanna Tioga October 1986 November 1984 Union Venango November 1985 February 1985



Warren

Wayne Westmoreland

Washington

Wyoming York

April 1986

July 1986

June 1986 August 1986

October 1984

stream, they can cover water more quickly than their fly fishing counterparts.

Fly fishing on the 'Sock, nonetheless, is simply excellent. A caddis hatch graces the stream just about every day from mid-spring through early fall and mayfly hatches are frequent and vigorous. With good populations of native and stocked trout strung out along its length, it's difficult to pick hotspots on the Loyalsock. It comes down to a matter of angler preference of pools, riffles, or flats and getting in the creek when hatches are most likely to occur—from dawn to midmorning and an hour or so before dusk to dark.

Little Loyalsock Creek

Though little in name, the Little 'Sock is larger than most streams in the county and provides 13 miles of excellent trout fishing. The stocked portion of the creek runs from just west of Dushore along Route 87 to Forksville, where it joins Loyalsock Creek.

It's a fairly typical gravel-bottom mountain trout stream, with a good share of boulders and undercut banks. The Little 'Sock widens noticeably on its trek west from Dushore to Millview, and it's more heavily stocked and easier to fish toward the confluence with its big brother. Consequently, that area gets more fishing pressure, so anglers will have to decide on the best trade-off.

Fishing on the Little 'Sock peaks in April and May. The creek has some good annual hatches, especially around mid-May, but draws a lot more spinning tackle enthusiasts than fly fishermen. Minnows, worms, and corn are popular. Favorite spinners are small Rooster Tails in white or brown and Panther Martins with gold blades and fluorescent bodies.

Muncy Creek

Muncy Creek, in the southern part of the county, is a long, winding waterway that shares native brooks and browns and stocked trout with Lycoming County. The Lycoming County section gets most of the stocked fish, but the Sullivan County portion, just south of Route 220 from Beech Glen northeast, gets a lot less pressure and holds fish well. The creek, channelized by severe storms in 1972 and 1975, varies considerably in width. Pools up to 12 feet deep hold smallmouths as well as trout, although smallmouth fishing is spotty in the upper reaches.

The best fishing comes in April and May. After that, angling pressure takes a nosedive, but persistent anglers have good success through October, especially on the creek's larger browns. Access is easy from Route 220.

Clarion County by Jeff Mulhollem

Rugged, sparsely populated Clarion County was once a pristine wilderness with many clean streams inhabited by trout and smallmouth bass. Chief among these was the beautiful Clarion River, which runs diagonally southwest through the county to meet the Allegheny River.

But beneath much of Clarion County, the Brookville and Clarion coal seams run rich and were extensively mined.

These bituminous layers, because of their extremely toxic overburden, are the most environmentally damaging when exposed. The results of the mining were predictable.

Most Clarion County streams are barren, fishless and ruined, polluted by acid mine drainage, appearing orange-stained or gray.

But four small freestone streams are stocked with trout. The fishing is all put-and-take.

Portions of the still-scenic Clarion River and the larger Allegheny offer good angling opportunities for warmwater species, as does Redbank Creek. Kahle Lake, which has its breast in adjacent Venango County, also provides some fishing for warmwater gamefish in Clarion County.

Clarion County does boast one of the most beautiful state parks in Pennsylvania, Cook Forest State Park. The 8,000-acre vacation spot straddles the upper Clarion River near Cooksburg and the border with Jefferson County, off Route 36.

Cook Forest State Park contains a significant stand of white pine and hemlock. This stand has been designated as a national landmark by the Park Service.

More than a million visitors annually take advantage of Cook Park's natural beauty. Many of them use the area as a put-in or take-out point for canoe trips on the Clarion River. Many paddlers also enjoy the river's spunky smallmouth bass population along the way. More than 200 campsites are available in Cook Forest State Park.

Allegheny River

From Emlenton to Lock 9, this river holds sizable populations of largemouth and smallmouth bass, walleye, northern pike, channel catfish, and panfish. Some big muskies are also taken out of the Allegheny every year. The river is Clarion County's southwestern border.

The Allegheny occasionally produces some very nice catches of walleye. Live bait, particularly minnows, accounts for many.

Clarion River

In addition to smallmouth bass, the 40-mile-long Clarion River also holds walleye, channel cats, northern pike, and a few muskies. Its upper reaches are stocked with brown and rainbow trout every spring.

Piney Dam, a 17-mile-long reservoir backed up for power generation on the river near the town of Clarion, the county seat, is a hotspot. This waterway is also called Clarion River Dam, and trolling seems to be the best way to tempt its muskellunge and walleye.

Redbank Creek

This big stream is the southern boundary of Clarion County, emptying into the Allegheny River. Near Brookville in Jefferson County, it is a first-rate trout stream. In Clarion County, however, the Red Bank is wider and slower, the home of smallmouth bass, walleye, muskellunge, and lots of northern pike.

Some big muskies swim up into the Red Bank from the Allegheny and are most vulnerable in the autumn. The best fishing seems to be around the town of New Bethlehem. A Conrail branchline parallels the Red Bank for nearly its entire length, and access to good water can be gained from it.



In Sullivan County, the Fish Commission stocks about 100 miles of streams with trout. In Clarion County, some 25 miles are stocked. In Snyder County, 37 miles are stocked, and in Forest County, the Commission stocks about 99 miles of streams with trout.

Kahle Lake

On the border of Clarion and Venango counties, this 253-acre lake has been stocked with largemouth bass, muskellunge, and walleye. It produces year-round and is popular with the ice fishing crowd. Angling for largemouth bass with plugs ranges from good to excellent here, with some big bucketmouths netted each year.

Cathers Run

This tumbling mountain stream flows south, emptying into the Clarion River near Cook Forest State Park. It is stocked with rainbow and brown trout. Route 36 will get you there.

Leatherwood Creek

Another small freestone stream, Leatherwood flows into the Red Bank near New Bethlehem. It is stocked with brown and rainbow trout. Access can be gained from Legislative Route 16007.

Turkey Run

Located near St. Petersburg Borough in the western tip of Clarion County, this little freestoner is stocked with browns and rainbows. Legislative Route 16042 crosses the lower end.

Canoe Creek

A pretty, secluded stream, Canoe Creek begins northeast of Knox Borough in State Game Lands 63 and flows south, emptying into the Clarion River a few miles after it passes under Interstate 80. Canoe Creek is stocked with browns and rainbows, and is crossed by Route 208 between Shippenville and Knox.

Snyder County by Jeff Mulhollem

Susquehanna River

Snyder County is entirely bordered on the east by the Susquehanna River, which provides excellent fishing for warmwater species. Four access areas near productive stretches make it easy for anglers to launch boats into the river not far from the best water. Smallmouth bass fishing in the river is very good along the length of Snyder County, but several hotspots exist for channel catfish, muskellunge, walleye, and panfish.

Hummells Wharf, not far from Shamokin Dam Borough, is the northernmost hotspot. Just off Routes 11 and 15, the Pennsylvania Power and Light Company maintains its Shady Nook access area and boat launch.

A new bridge is being built across the river at Shamokin Dam. This area, too, has been giving up a lot of big fish. Boats can be launched at 8th Street, but be careful if the water is low. A collapsible fiber dam was placed on the river nearby, and anglers have been scoring just below the structure.

Farther south, fishing is especially good around Hoover Island. Routes 11 and 15 parallel the river here as well. The Fish Commission has as access area at Hoover Island.

The Commission's Mahantango Access near the southern tip of Snyder County is another good place to try. It is 4 miles south of Port Trevorton along Routes 11 and 15. Fishing seems to be especially good near McKees Half Falls. The only problem is that boat launching here can be difficult during low-water periods.

Middle Creek

Near Beavertown, this stream is big and offers some fine fly fishing for brown trout. It's stocked from the little community of Middle Creek to Middleburg. The biggest water from Beavertown to Middleburg harbors some holdover fish. The stream seems to have some limestone influence and is fairly rich in aquatic life. North Branch Mahantango Creek

This stream is medium-sized and stocked with brown trout. Fishing opportunities are particularly good. Route 104 provides access.

West Branch Mahantango Creek

The West Branch is longer than the North Branch and provides slightly better trout fishing. The Fish Commission has been stocking more miles of the West Branch in recent years than ever before. Legislative Route 54002, stocked with browns and rainbows, parallels the stream for much of its length.

North Branch Middle Creek

Stocked with mostly brown and rainbow trout in recent years, Middle Creek flows out of Walker Lake. Route 235 provides access about midway between the North Branch's source and its mouth.

South Branch Middle Creek

Eight miles of this wide stream are stocked with browns and rainbows. The best fishing is north of the Borough of McClure. Legislative Route 54048 will get you there, and Legislative Route 54025 crosses the stream. A historic wooden covered bridge crosses the South Branch at Beaver Springs.

Swift Run

This pleasant little mountain stream offers good to excellent angling for brook trout and is stocked over more than 8 miles. Fishing is best in the lower end, where the stream is larger. A hotspot is north of Troxelville. State forest land is located on the upper end of Swift Run. Legislative Route 54023 crosses the stream's lower reaches.

Kerns Run

Flowing north through Beavertown Borough, this little freestone mountain stream also is stocked with brook trout over three miles. It goes underground near Beavertown. A drinking water reservoir was built across its upper reaches several years ago, and some big brookies have been caught in the dam's trailrace.

Penns Creek

One of the state's finest trout streams in adjacent Union and Centre counties, Penns Creek widens and slows in Snyder County, providing some good smallmouth bass fishing. Rolling through the northernmost portion of the county, Penns Creeks empties into the Susquehanna near Selinsgrove, the largest town in Snyder County.

Some muskellunge fingerlings have been placed in lower Penns Creek by the Fish Commission over the years, and they tend to work their way down into the Susquehanna, but a few are caught in Penns Creek each year.

The Susquehanna around the mouth of Penns Creek, especially in the fall and winter when ice is not clogging the river, produces some big muskies each year. Anglers in the know use large jigs, big jointed Rapalas, and live bait there.

Route 204 crosses Penns Creek at New Berlin, and that part of the stream is a good place to start for smallmouth.

Walker Lake

The 239-acre impoundment has been stocked with

northern pike, largemouth bass, and muskellunge, but pike seem to have become the dominant species.

Ice fishing is good in this deep lake. There are a lot of panfish, crappies, and yellow perch for hardwater anglers. Plugs and spinners account for most big largemouth bass.

Faylor Lake

Covering 135 acres, this small, shallow lake has quite a bit of cover for its largemouth bass, pickerel, and assortment of panfish. Ice fishing for panfish is especially good here.

Middle Creek Lake

Located near Selinsgrove at the mouth of Middle Creek, this lake is breasted by an old dam that the Fish Commission bought in the 1950s. The Commission currently leases the dam to a power company that restored the dam and uses it to produce electricity.

The impoundment is shallow and covers just 100 acres, but it offers a little bit of everything for the fisherman, including a lot of carp. The largemouth bass fishing ranges from decent to pretty good, and there are lots of panfish.

Jeff Mulhollem is a freelance writer-photographer. For their assistance with this article, he thanks Robert J. Cortez, Clarion County waterways conservation officer, and Richard Fry, Snyder and Union counties waterways conservation officer.

Forest County by Joe Kopena

Forest County, with a population of 4,800, is the least populated county in the Commonwealth, but it also has more than 6,300 hunting and fishing camps, and has some of the finest trout fishing and warmwater fishing in Pennsylvania. Forest County is 420 square miles and is the gateway to the Allegheny National Forest. Forest, Elk, Warren, and McKean counties are in the national forest with a total of 508,500 acres. About 118,250 acres are in Forest County, where 12 out of the 18 approved trout waters are located.

If you want to get away from the crowds and want to hike to some secluded areas, there are 105 brook trout streams in Forest County. You'll find some of the best native brook trout fishing in Otter Creek, Logan Run, and Hasting Run. Maps are available for \$1 at all the sporting goods stores in the county and also at the U.S. Forest Service in Marienville.

Tionesta Creek

Tionesta Creek runs along Route 666 from Kellettville to Barnes, in Warren County. Some 17 miles from Kellettville to the Forest-Warren County Line are stocked with trout, including an additional 6 miles in Warren County. The East Branch, West Branch, and South Branch make up Big Tionesta Creek, stocked in Warren County. Maggots, worms, salmon eggs, and minnows are the best baits in June, July, and August with wet or dry flies. Muskies and smallmouth bass are also caught in these waters.

Salmon Creek

Salmon Creek flows through the national forest and runs along Forest Service Route 145. The stream can be reached at Kellettville on Route 666 and Marienville on Route 66. About 5 miles of the creek are walk-in, which starts on the Bluejay Job Corps road west of Marienville. Brown, brook, and rainbow trout are stocked, and the best baits are maggots, worms, minnows, and salmon eggs. Trout are also taken with spinners.

East Hickory Creek

East Hickory Creek is stocked from Route 62 at East Hickory to Endeavor, and then on Legislative Route 328 and upstream into Warren County for about 4 miles. A section of East Hickory Creek will be set aside for delayed harvest. This area will be from the Otter Creek confluence to the Queen Creek confluence. Nightcrawlers are hot for some of the big lunkers that are caught during July, August, and September.

Spring Creek

Spring Creek is stocked with brookies and brown trout from Duhring to Elk and to the Forest County line, and is stocked an additional 6 miles in Elk County to Hallton. You can get to this waterway north of Marienville on Route 66 to Legislative Route 327. Early in the season, worms, spinners, and salmon eggs produce well. Wet and dry flies in the months of June, July, and August are good bets.

Bluejay Creek

This stream is located along Legislative Route 27015 between the villages of Lynch and Pigeon. Bluejay Creek has 5 refuge areas (wired areas) located on the stream. Brook trout are stocked in this stretch. Mostly salmon eggs, worms, and spinners are used.

Big Coon Creek

Big Coon Creek is located along Legislative Route 27010 at Golinza, which can be found near Newmansville along Route 36. This stream flows through state game lands and produces stocked brook trout and also native brookies. The creek has been opened and stocked by the Fish Commission in the past two years. It only gets in-season trout plantings. The total stocking area is about 8 miles to the confluence of Wards Ranch Pond, which is also stocked with trout. Access here is walk-in only.

Wards Ranch Pond

Located between Vowinckel on Route 66 and Muzette on Legislative Route T344, this waterway is 10 acres in size and is stocked with brook trout including trout for winter fishing. The best baits are worms, salmon eggs, minnows, and spinners.

Toms Run

This stream is located in Cook State Forest at Cooksburg along Route 36. About 4 miles of Toms Run are walk-in only and another 2 miles are along paved highway in the park. A portion of the stream is in Forest County, but most of the stream is in Clarion County. A children's area is located at the park office in Cooksburg.

West Hickory Creek

West Hickory Creek can be reached at the village of West Hickory, along Route 62, and on Route 127 between West Hickory and Neiltown. This creek receives brown, brook, and rainbow trout. There is also a stretch of water (3 miles) that is walk-in only. The best baits are worms, minnows, salmon eggs, and spinners. Big brown trout are taken in the months of June, July, and August on minnows.

Maple Creek

Maple Creek is located near North Pine Grove on legislative Route 16058 in Clarion County. It is stocked from the village of Gilfoyle on Route 66 to Route 899 near Clarington. Minnows, worms, and salmon eggs are the best baits. Spinners of all types are also good. Large trout are caught in the month of July and August on minnows.

Tionesta Lake

Tionesta Lake is located along Route 36 south of Tionesta. An access is located along Route 36, and another access can be reached at Nebraska Bridge. This lake is 6 miles long and is about 480 acres. Muskies and smallmouth bass are the top fish. Panfishing here is also getting very popular. Muskies in the 40-inch to 50-inch class have been caught.

The upper part of Tionesta Lake from Nebraska Bridge to Ross Run is excellent for smallmouth bass fishing. Leaches are a hot bait here for smallmouths, as are Rapalas, jointed pikie minnows, and spoons. The best times for catching muskies here are September, October, and November. The lower end of the lake is open to high-speed boats and above Lackey Flats is marked with 10 mph buoys. This area is good for fishing from May to Labor Day.

Clarion River

The Clarion River is a popular canoe spot from May 1 to Labor Day. Beautiful catches of smallmouth bass and trout are made. Evening fishing during the weekend is best using flies and minnows for bait for trout. Nightcrawlers and minnows are hot baits for smallmouths, including many other lures you'd use elsewhere for these fish. Weekdays during the summer are good because there is less boat traffic. During the summer months, the river gets very low and motorboats are not recommended. Small electric motors are sometimes used.

Allegheny River

The Allegheny River in Forest County produces walleye, muskies, smallmouth bass, northern pike, trout, flathead catfish, channel catfish and panfish like crappies and perch. Annual stockings of musky and walleye fingerlings are made in the Forest County portion of the river.

Boat traffic here is heavy on weekends, and it seems as if canoes are taking over the river in this location. Fish Commission access areas are in Tionesta and West Hickory, and there are two additional private launches in the Tionesta area.

Joe Kopena is the waterways conservation officer for Forest County.

ANGLERS CURRENTS

Thaddeus Piotrowski Named to Boating Advisory Board

Thaddeus "Ted" Piotrowski, of Bloomsburg, was named recently to the Boating Advisory Board by Governor Dick Thornburgh.

Mr. Piotrowski earned a bachelor of science degree from California (PA)



State Teachers College and a master's degree from Penn State. Since 1971, he has been active in the U.S. Coast Guard Auxiliary. He has taught many boating safety and seamanship classes, and he's supervised sailing classes. His leadership role in the Auxiliary includes his serving as public education officer, membership training officer, courtesy motorboat examiner, and flotilla commander.



by Dave Wonderlich

When float fishing rivers and larger streams, electric motors can be used to slow and control the drift, allowing time to fish the water adequately.

Stream fishing in November after a rain can produce hot action. Fish are putting on weight before winter sets in, and food washed into the stream can put them into a feeding frenzy.

Nymph fishermen should give the Isonychia a try. The nymphs are still hatching in November and the trout feed on them.

When tying together fine leader material or very light monofilament line to a heavy shock tippet, tightening both ends of the blood knot can break or weaken the lighter material. Try tying the lighter line onto the heavier piece with an improved clinch knot on the heavier line where the lighter line is connected. Wet the line and work the knots tightly together with the fingers to prevent line damage.

Don't pass up dry fly action in November. A sunny afternoon can change surface temperatures enough to bring the trout up for blue-winged olives and midges. Try river smallmouth fishing in the deep eddies next to riffles. Let your offering drift with the current and then swing into the slack water. A slow retrieve along the edge can bring smashing strikes.

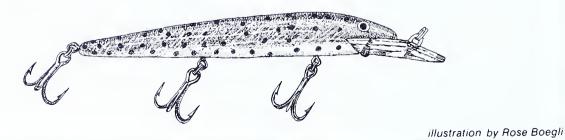
November surface feeding trout can be very discriminating. If they rise but won't take, put on three more feet of smaller diameter tippet material and try again.

For November bass, don't pass up the head of deep swift runs where submerged rocks break the flow. This haunt is a favorite of the big ones.

Before casting make sure your reel drag is properly set for the type of fish you are after. If it is too light, it may not allow a good hook set in a bony mouth, and too tight a drag will rip the hooks from papery mouths.

Try trolling a minnow three feet behind a bobber for pike. The float not only keeps the minnow splashing around the surface but also acts as an attractant.

In November it is important to get lures down to the fish. After casting, let them sink toward the bottom before beginning your retrieve.



PENNSYLVANIA FISH COMMISSION

Dedicated to the sound consertion of our aquatic resources, protection and management of state's diversified fisheries, and the ideals of safe boating a optimum boating opportunities.

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Coyler Lake Reclaimed

Colyer Lake was one of the better Centre County fishing spots, but in recent years the 77-acre waterway has experienced problems. Bass and pickerel, although moderately abundant, are surrounded by a stunted and overpopulated panfish population, leaving few desirable-size fish.

The Fish Commission is revitalizing the lake, which is located one-mile south of Route 322 between Boalsburg and Potters Mills. Beginning at the end of July, the lake was drawn down 10 feet. Complete drainage of the lake will occur this fall. Adult bass, crappies, and bluegills will be salvaged whenever possible and maintained in Commission hatchery ponds until restocking in early 1987. Other salvaged fish will be stocked in nearby Sayers Lake.

Habitat improvement devices will be placed in the waterway, and the lake bottom will be limed. The restocking of fish will be in the form of adults only, plus fathead minnows as a forage fish.

Lake users should know that Colyer Lake will be closed during the later stages of the fall drawdown.



Penn's Creek Meeting

The Commission Office of Education and Information staff, pictured here, held a day-long meeting at the Commission's Station 22, on Penn's Creek in Union County. The productive session, which took place last October, included (left to right) Ted Walke, graphic designer and illustrator; Steve Ulsh, PLAY coordinator; Cheryl Riley, E+I director; Dave Wolf, Adopt-a-Stream coordinator and media relations contact; Larry Shaffer, responsible for broadcasting and special publications; and Art Michaels, editor of the Angler and Boat Pennsylvania. Not pictured here is staff photographer Russ Gettig, who caught everyone smiling.

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Publications Section Pennsylvania Fish Commission

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-MAIL-

I would like to complete my collection of licenses, and was wondering if any readers could help. I'm looking for a 1922 license, badges from 1923 to 1929, and licenses from 1960-61 and 1972-73. I'm willing to purchase or trade for these items.—

Joe Kunstek, 3622 Raymond Street,

Laureldale, PA 19605

I strongly support your stand for the need of effective action on the acid rain problem. The U.S. has been dragging its feet on this issue, while our northern neighbor has recognized it as a severe environmental problem.

I became aware of the acid rain problem years ago while attending school for forestry in upstate New York. I've read about and was involved with school projects studying the effects it has had on the high peak region of the Adirondacks in New York state. For years there has been much information gathered on the problems it is causing, yet no action has been taken to correct it.

I greatly appreciate our natural resources and I am proud to reside in a state willing to take a leading role in solving this problem. I would help any way I can.—Alan Kinley, Collegeville, PA

As you know, I continue to get Pennsylvania Angler and Boat Pennsylvania thanks to your kindness. Although I have never visited your state, there are a number of interesting articles which I read. The last one in the July Angler on summer trout fishing skills I hope to use in other areas of the country.

I felt that your "Straight Talk" on the issue of population control in the July editorial was exceptionally welldone and pertinent.—Virginia B. Ball, director-at-large, National Wildlife Federation

l am writing in reaction to your editorial in the August 1986 issue of *Pennsylvania Angler*. It was about 10 years ago, when I was involved with arranging for Columbia River shad eggs to be shipped to Pennsylvania, that we first met. Since then, we have crossed paths occasionally, but this is

the first good news I've heard in a decade about the Susquehanna shad; hence, this note.

I would like to think that the success in shad restoration has been the result of efforts with natal stocks. It would be nice if some of the Columbia River fish had helped, but the rewards of "scoring" with local stock are even better.

As noted in your article, some issues remain to be resolved, while the resource itself still faces a number of obstacles. Ironically, while events in your area hold the promise of more shad locally, we continue to be faced with an underutilized, overabundant species. Minimum run sizes into the Columbia have ranged from 1 to 2 million for the past decade. Landings by both commercial and recreational fishermen have remained well under 100,000 annually, mainly due to lack of demand.

I offer no suggestions for overcoming these imbalances, but with the gains being made on the Atlantic Coast, perhaps we might see some mutual goals to pursue for shad. Congratulations on the good work!—Kirk T. Beiningen, executive assistant, Oregon Department of Fish and Wildlife

I have seen your advice and cautions about walking on ice, like the item on ice safety that appeared in your December 1985 issue. The Whitworth's Engineering Handbook, published in England in the latter part of the 19th century, states: "The French Army specifications for traveling over ice were 4 inches thick for men, 8 inches thick for cannon and horses.

l have always followed similar advice, and only went in once. It was on a stream, at the edge, fortunately.—Edward J. Gibbons, Scotch Plains, NJ

l enjoy your magazine and would like to tell you about a friend I've had for many years. He's my fishing partner, and we go fishing no matter what the weather is. He is always anxious to go and provides all the equipment. We use a small boat most of the time, and we both understand why small fish must be returned to the water. My friend would rather go home empty-handed than take small

fish, and he keeps only what his family can use. I'd like to share him with everyone, but he is mine to keep, and I wish everyone could be like him. You probably guessed by now—he's my son, John Samuel. I know this isn't much of a story, but perhaps other readers know what I'm talking about.—Ariel Charles Boop, Bloomsburg, PA

Believe it or not, a few Decembers ago my son-in-law and 1 went out and picked six dozen nightcrawlers in about 15 minutes. This took place in Mercer County. I have never seen anything like this in Pennsylvania for the month of December, and I thought Angler readers would be interested in things like this.—John Stull, Fredonia, PA

Sometimes the weather does seem to be very out of place. This fall, it seemed as if one day the air conditioning was going and the next day the heat needed to be turned on. Still, some folks really love the supercold temperatures. If you're one of them, be sure to check out Harry Murray's article in the December issue on how to fish in cold weather comfortably.—Ed.

I just recently read a story in my February 1984 Angler called "Some Gall," by Rhume Streeter. I decided to try these gall moth larvae for ice fishing last year, and I have one thing to say about these little critters: WOW, do they ever catch fish! Since we've been using them, we've been catching crappies like there's no tomorrow—some are 121/4 inches long and 5 or 6 inches across. I know some of these crappies are close to the state record. We've been doing well using this bait on other fish, too. We've been catching these large crappies in Rose Valley Lake, in Lycoming County. What a great bait, and what a great magazine you put out!—Gary Heisley, Montoursville, PA

Congratulations on the ice fishing success! For more lowdown on how to catch the big ones and where to go for hard-water angling success, don't miss the article on all the Commission Angler Awards offered last season for ice fishing catches. Look for this feature in the December issue.—Ed.

'Notes from the Streams"

Sugar Bay retriever

On the Fourth of July, DWCO Neil Cook, Deputy Observer Ron Cochran, and I were on motorboat patrol on the Allegheny Reservoir in Sugar Bay when we saw a man catch a huge carp. Alongside the man was a small brown terrier that was watching the action quite eagerly. As soon as the fellow released the fish, his dog would dive in and drag it back out. After a few more throwbacks and retrieves, I asked, "Does your dog have a fishing license?" The fisherman replied, "She doesn't need one, she's only 10 years old."-Don Parrish, waterways conservation officer, McKean County

Strolling along

DWCO Don Durochia told me a first in my career. He was checking fishermen between Franklin and Emlenton on the Allegheny River one Saturday morning. In starting the conversation, Don asked one angler how he was doing. The fisherman replied that he hadn't had a hit. Don suggested several of his tried-and-true techniques, one of which was slow trolling. The fisherman said that he had been "strolling" for over two hours and hadn't had a hit.—

Robert L. Steiner, WCO, Venango County

Hopes and wishes

When you go fishing, may you have: Enough sunshine to brighten your day . . .

Enough skill to catch the big ones . . . Enough success to keep you eager . . . Enough appreciation for the beauty of nature not to litter . . .

Enough courtesy and respect to thank the landowner . . .

Enough foresight to take along a child.

—Don Parrish, WCO, McKean County

Taking it seriously

Just after starting patrol one day, I pulled into a local mini-mart for a cup of coffee. As I got out of the car, an obviously lost tourist with out-of-state license plates pulled in and asked directions. While I explained the easiest route to take, he gave me the once-over, checking out my uniform and vehicle from top to bottom. When he was ready

to leave, he thanked me for the information, turned to his wife, and said, "I think they take their fishing seriously in Pennsylvania."—Kim Pritts, WCO, northern Lancaster County

A frog and a bobber

A bass fisherman relayed the following information to me: One night last August, he was using a frog for bait. He had been fishing for almost an hour and hadn't gotten one hit. When he turned his flashlight on his bobber, he discovered the problem—on top of the bobber sat the frog!—James E. Ansell, WCO, Fayette County

Serving warrants

Warrant service seems to be a neverending task. One day while driving through Center Square in Lancaster County, DWCO Eichler and I spotted an individual for whom we had a warrant. When we pulled over and got out of the car, the individual saw us and decided to make a hasty retreat. We, of course, chased him. As I circled a group of young men sitting on a park bench, one of them jumped up with a startled expression, took several steps as if he were going to run, and then stopped quickly. We weren't after him, but it was obvious that he wasn't sure. As I brushed him to apprehend the guy we were after, I heard him say to his friends, "Man, I thought they were coming for me!"

On another occasion, after receiving an arrest warrant on an individual who had been cited for fishing without a license, I learned that he was wanted on various charges and maintained a list of addresses in Pennsylvania and Maryland. DWCO Eichler and I started our warrant investigation by tracking down his friends in the Lancaster area. Apparently, some of his associates became jittery and got the word out to him. The next day he turned himself in to the district magistrate to face arraignment on all the charges he had amassed over the last 5 years! His reason? He didn't want "those guys with the warrant" to come after him again!—Kim Pritts, WCO, northern Lancaster County

North Branch Susquehanna Smallmouth bass

Where's the best smallmouth bass fishing in Pennsylvania? Wyoming and Bradford County locals claim that the North Branch of the Susquehanna

River offers the only first-rate small-mouth bass fishing in the state.

This claim is tall, but anglers expect the river to produce excellent small-mouth bass and walleye fishing by the end of July and early August. This idea can be supported by the success anglers had last year. Smallmouth bass and walleye were taken on a variety of crankbaits while trolling, on jigs rigged with light-colored plastic action tails, and baitfishing with stonecats and hellgrammites.

The smallmouth bass is one of the most important freshwater fishes in North America and can be found almost anywhere there is a clear rocky habitat. This bass prefers a good percentage of riffles flowing over boulders and gravel with the water temperature in summer no less than 60 degrees and no more than 80 degrees.

The smallmouth bass matures at different times, depending on its growth and the latitude of the water it inhabits. Growth depends on the amount of feed available to the fish, the water temperature, and the length of the growing season. In some infertile streams, for instance, it takes a smallmouth bass 4 years to reach a size of 9 inches. In larger, fertile rivers, like the North Branch of the Susquehanna, the same bass would reach 9 inches in two summers. On the average, it takes 8-10 years for a bass in a fertile river to obtain a length of 18 to 21 inches.

With this information in mind, the North Branch angler has many options while selecting a river section to fish. Local anglers think that several river stretches are more productive than others. These spots are from Tioga Point to Ulster, the Commission access at Terrytown to Rocky Forest, Laceyville to Black Walnut, the Meshoppen Bridge to the Mehoopany Bridge, and the Tunkhannock Bridge to the Commission access at Whites Ferry.

Most of the North Branch can be fished from boats in the 12-foot to 14-foot range with small outboards. Cartop boats and canoes can be slid into the river without the aid of ramps, which increases the areas of access. Most landowners allow access to the river, provided that the angler has permission.

The smallmouth bass is an aggressive, robust fish, and you'll find plenty of big ones in the North Branch of the Susquehanna.—Mark D. Couch. Commission creel clerk, Wyalusing



Ball caps

Choose from two kinds — "Fish Pennsylvania" and "I'm a Pennsylvania Boater." These hats feature highquality mesh with rugged denim. The fishing cap has a handy license holder on the left side. One size fits all, with convenient plastic-pegged adjustment.

Fillet knife

Here's a fillet knife for the discriminating angler-chef. The 6-inch stainless steel blade extends through a handle of ivory-colored Delrin, which is contoured for a firm grip. Embedded in clear acrylic in the handle is the inscription "PENNSYLVANIA FISH COMMISSION — Established 1866," and the familiar Fish Commission keystone logo appears on the handle. This knife is a utensil of quality.

Paddle Pennsylvania

Section-by-section detailed descriptions of some 18 Pennsylvania waterways highlight this publication, a 36-page guide for all Keystone State canoeists. In addition you'll find useful information on canoe safety, planning trips, camping, and white water. Each waterway is divided into numbered sections, keyed to the map, with detailed descriptions.

Pennsylvania Anglers' Cookbook

This 168-page Commission classic belongs in every angler's kitchen. You'll find a thorough treatment of every aspect of fish cookery with recipes for everything from bass to walleye. The book also contains the details on smoking, pickling, canning, and freezing fish, and special chapters include information on preparing frogs, snakes, mussels, and turtles. Two special sections have recipes for batters and sauces. All recipes and other preparations were solicited from Pennsylvania Angler readers.

PLAY membership

The Pennsylvania League of Angling Youth (PLAY) is an educational program specifically designed for youngsters. Members receive a colorful jacket patch, a quarterly newsletter, special Fish Commission publications, and access to the PLAY Correspondence Center.

Pennsylvania Angler, Boat Pennsylvania subscriptions

Pennsylvania's official fishing and boating magazines let you give the gift of year-round fishing and boating fun. Both magazines offer first-hand information on Pennsylvania waterways, rules and regulations that affect your sport, where to find the best action, and how to improve your skills. An announcement card will be sent to gift subscription recipients.

The order form for these gifts appears on page 29



Straight Talk

The Election and New Challenges

Since the reports came in from another election day, independent administrative agencies begin to pick out friends and possible adversaries from the emergent victors.

Although considered an off-year election nationwide, the fourth of November 1986 was recorded as having the lowest turnout in 44 years, and that's shameful. Dramatic differences will result from that election nationwide, and yet the victories, in most cases, were by very slim margins. If you want to think about it, go back 44 years to the previous low turnout, which was in 1942, the middle of World War II, when 10 million young men and women were in the service and the



Ralph W. Abele Executive Director Pennsylvania Fish Commission

nation was geared up to a wartime economy with many disruptions. I was eligible to cast my first vote, and did so by absentee ballot from Normandy, France, on the fifth of July 1944.

It is apparent that many people don't care, yet some of those who sit at home, or are worried about the weather, or don't think that their votes count, are first to gripe when they don't have as many creature comforts as their definition of "the good life" demands. Complacency with low interest rates and low inflation, and what the employed people consider a good economy, has really taken its toll.

A general national disease is rampant: "focusing on the short term."

At this time, it might be worthwhile to remind readers that even though we are an independent administrative agency, not under the governor's jurisdiction, there are influences from a governor's office that affect us-pay scales, union negotiations, purchasing (everything except fish food), and more of an influence on our personnel matters than the Fish and Boat Code provides for. At the same time, we are certainly at all times sensitive to what happens in the General Assembly. It is apparent at this point that all incumbents in running for election in the Pennsylvania General Assembly were returned to office, and we think that most of the time we have a very fine working relationship with the lawmakers. That doesn't mean that we don't disagree sometimes, but we feel that we have established enough credibility over the years that in most cases they are not the least bit arbitrary about making changes in laws that could affect us adversely. We hope to continue that fine relationship.

As we look to a new governor, we have to wait and see. We don't know much about Governor-elect Casey's environment positions because we are unaware that he has outlined any to

date. Certainly the selection of a cabinet has a serious effect on how we work with the executive branch of Pennsylvania's government.

When it comes to what we hope to see in qualifications of a secretary of the Department of Enviornmental Resources, those qualities would include a successful background as a manager and executive of a large organization; a solid education and experience in natural resources management; and a political independence and acumen. Throw in on top of these the personality, ability, perseverance, and diplomacy necessary to gain public confidence in the Department. Certainly we prefer the approach to be tough in the protection of the state's resources, but pragmatic in dealing with industry and the legislature. The door should be open to public input—firm, but understanding and flexible with industry.

As always, we advocate that the Department's mission should be the protection and enhancement of our resources against exploitation, realizing that it is really the role of the departments of Commerce, Agriculture, and Labor and Industry to be advocates of the exploiters.

Sooner or later, it is our hope that the Department is separated into two agencies, with the role of environmental protection in one, and the resource management (Forests, Parks, Soil and Water Conservation, Geological Survey) in the other. The Department is too large and is, we repeat, unwieldy.

At the same time, it will be tough to find the effective leadership necessary for management of this extremely important agency. As Frederick Law Olmsted said over 100 years ago:

"Integrity, general education, business experience, and good taste do not in themselves qualify men to guard against the waste of essential values. There are thousands of estimable men who have no more sense in this regard than children."

Falph W. Phele

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Pennsylvania The Keystone State's Official Fishing Magazine

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The cover

This issue's cover, photographed by Linda Steiner, shows a Venango County December scene. In the holiday spirit, beginning on page 4 you will find an extensive list of gift ideas from which you can choose something just right for anybody, and then beginning on page 14, check out the cures for cabin fever you can apply if winter gets to you. Ice fishing enthusiasts will surely want to scan the details on Anglers Awards offered for ice fishing catches, which begins on page 16. If you're a trout fisherman and winter doesn't seem like the right time to try your luck, you might reconsider after reading the article that starts on page 23.

87 Gift Ideas for Fishermen

by Art Michaels

uving fishing and boating gifts for people on your list can solve many gift-giving problems. Even for the sportsman who has everything, there are always replacement items and better quality equipment and tackle that would make great gifts.

Along these lines, here are no fewer than 87 gift ideas in 19 general areas (count 'em!) for anglers at all levels of know-how. Use these specific suggestions, or let the general ideas point you in the right direction.

Personal flotation device (PFD). Even though you need only have PFDs available on some boats for all aboard instead of wearing them, a PFD makes a good gift because it's a required safety item. In fact, it's wise to encourage your gift-getter to wear the new life jacket, not just have it available in the boat.

Life jackets come in all kinds, styles, and sizes, so fitting anyone should be a snap. If you're replacing a PFD for an angler who already has one, you can buy the same size and style as the one you're replacing and you can be reasonably certain of the fit.

But for maximum comfort and safety, don't surprise a first-time PFD wearer with the gift of a new device. Better take him or her to the store to try on the life jacket for the best fit. Furthermore, let the first-time wearer test the PFD under proper supervision in a swimming pool so that the wearer learns how the buoyant device works.

Small-boat anglers might like to receive type IIIs, which are comfortable to wear and double as fishing vests.

Lures. Sure, we all have tackle boxes full of them, but that's one thing that makes some anglers more successful than others—the ability to pick a lure from an enormous selection that's just the right kind, style, size, and color that the fish are taking.

Remember to consider giving three or four of the same lure. If your giftgetting angler uses one lure in a specific fishing situation frequently during the season, for example, a gift of three or four of the same lure would be a good choice.

Hooks. Anglers might like a box or two of their favorite lure replacement hooks or bait hooks in different sizes, or you may want to consider giving replacement treble someone's favorite worm hooks.

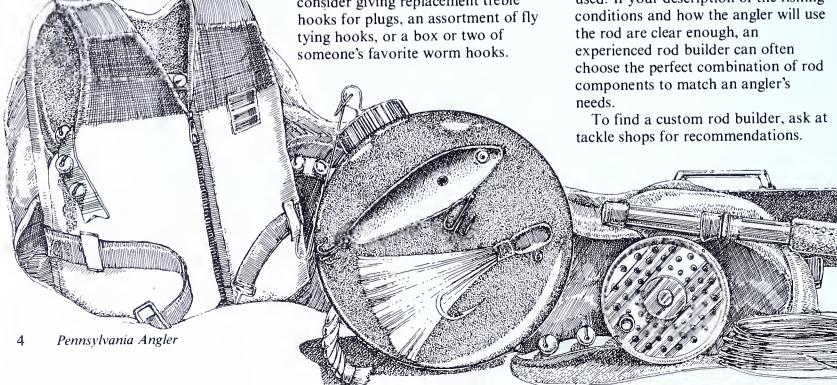
Line. Ask on this one. You know why—we all want different colors and strengths of line on each outfit. In addition, if the gift-getter uses several rod and reel combos with the same exact kind of line, consider getting 1,000-yard or 3,000-yard spools. If he uses several outfits with lines of varying strengths, colors, and visibility qualities, perhaps 275-yard reel fill packs would be best.

Terminal tackle. It's the little things that count, so think about buying someone a season's worth of stuff. Consider swivels, snaps, sinkers, a splitshot assortment, and leader material, for starters.

Small accessories. How about long-nosed pliers with a leather belt case, a stringer, or a new towel and belt clip? Before the hint gets too obvious, find out what items need replacing, and then go to it.

Custom-built rod. Custom rod builders are your best bet here when it comes to new rods so that what you get is extra special. A kit could be fun, too, but if you or the person to whom you're giving the kit lacks the rod building skill, the results may draw only mixed reviews.

Be sure you can tell the rod builder the specifics of how the rod will be used. If your description of the fishing the rod are clear enough, an experienced rod builder can often components to match an angler's needs.



Fly fishing tackle. You could spend an arm and a leg on these items, as you could for other items, but if you don't have money to burn, consider a streamer fly wallet, a selection of flies, a bunch of commercially made or hand-tied leaders, a wading staff, fly line, a tape measure, a net, wading socks, gaiters, a new vest, or forceps on a retractable clip.

Fishing books. What a great way to work off a case of cabin fever, review skills and tactics, and learn new fishing ideas!

Lake Erie charter boat fishing trip. No, it's not too early to book for this coming spring. Your gift-getter would probably get a big kick knowing all winter long that he and his friends are booked for a trip next spring when the big ones start biting.

Fishing seminars. Many individuals, groups, and organizations offer terrific instruction, seminars, and schools, some onenighters, some day trips, and some that last several weeks. I know a few candidates in my family for these sessions. They're good for experts who want to bone up on the information and for less-skilled anglers who could benefit by learning new and useful fishing tactics.

Individual instruction is useful if you'd like to learn successful strategies for one fish species, or if you'd like an expert to show you how to fish a specific waterway.

Safe boating course. The U.S. Coast Guard Auxiliary, U.S. Power Squadrons, and the American Red Cross, for example, offer courses in boating. New-boat owners in the family or friends who are novice boaters would be good choices for this gift.

The cost of enrollment in a boating course is surprisingly low, and many boating courses are free. Maximizing the safety of a loved one is worth much, so this gift idea is one of the best.

Boating accessories. This suggestion is wide open, but useful. Fishermen don't often think of themselves strictly as boaters, so a boating gift could be a pleasant, practical surprise for an angler. For someone with a small boat or canoe, how about new oars, paddles, portable bow and stern lights, an anchor, a half-dozen shear pins in the correct size, portable rod holders, an electric motor, or a battery charger? For those with larger boats, how about an ensign (flag), fire extinguisher, navigation chart, or first aid kit?

Electronic device. A marine VHF radio, CB, antenna, Loran, chart recorder, or temperature gauge could be just the right item. Some of the newer liquid crystal display or color display depthsounders might be right, too.

Boating books. If you're considering fishing books, look also at boating books. In my opinion, one book that every boater should have is Chapman's Piloting, Seamanship and Small Boat Handling. It's a recently revised and updated classic.

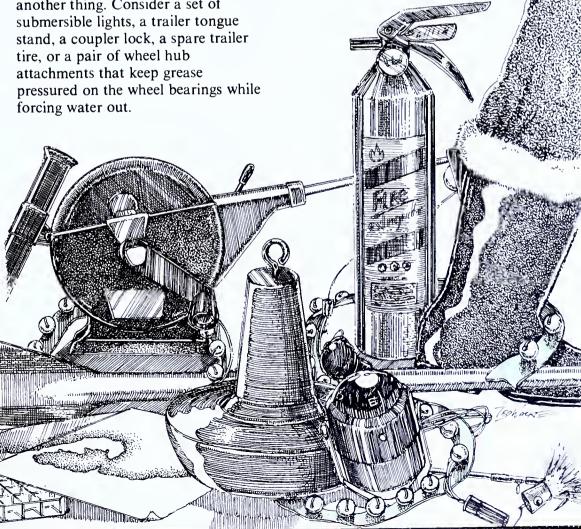
Trailering accessories. An angler and his boat are one thing. His trailer, which most people ignore at a time for giving gifts, is another thing. Consider a set of submersible lights, a trailer tongue stand, a coupler lock, a spare trailer tire, or a pair of wheel hub attachments that keep grease

Tool kit for a boat and trailer. If your gift-getter already has a tool kit, how about adding to it?

Magazine subscription or renewal to Page 1 Angler and Boat Pennsylvania. these magazines you can give the gift of good year-round sport, on the water or in an easy chair. Check out this issue's back cover to take advantage of this idea.

Other items. Finally, you may wish to consider gifts like these: a fishing hat, an angler's thermometer, a season's worth of sun block, a commercially available fishing or boating log, a catalog or store gift certificate, fish attractant, binoculars, rainwear, a compass, a spring scale, a case of 50:1 oil, an ice chest, a fillet knife, anchor line, a prop, a downrigger, a gaff, a reel, waders or hip boots, a vacuum bottle, a smoker, a new tackle box, a boat carpeting kit, a creel, ice fishing gear, or a fishing license.

Art Michaels is editor of Pennsylvania Angler and Boat Pennsylvania. This year he expects the usual holiday offerings of ties and socks, but who knows—maybe his family's reading this article.



Readin, Writin, Rithmetic, and... Fishing



During the fifth week of the course, the students went on a real fishing trip to Little Buffalo State Park, Perry County.



For these kids, fishing has a place in their academic studies in addition to their recreational activities.

by Mary Chambers

ridays at school last fall were exciting for our son Alex not because it was the end of the week and the weekend was coming, but because he had fishing class at school. Every Friday for six weeks, Alex was scheduled in the afternoon for a mini-course called "Fishing." This was his first year at a new school, and as a third-grader he was pretty apprehensive. However, when he found out he had the opportunity to sign up for a course in fishing, his reluctance about the new school turned to a sense of adventure.

The information he learned about the different types of fish, their habitat, and their behavior was a lesson in biology.

Every week Alex would come home with new knowledge from his fishing course. The course was taught by Bill Porter, a member of the Commission Volunteer E+I Corps and an experienced angler; Steve Ulsh, Commission information specialist who oversees the Volunteer E+I Corps; and Sandy Miller, a fourth grade teacher. They discussed proper fishing equipment and technique. One afternoon was spent casting on school grounds, so they were well-prepared for the actual event.

His fifth week in the mini-course was a highlight. The class went to Little Buffalo State Park for a real fishing excursion. Fishing for Alex is not new because his family enjoys these outings frequently, but to share it with classmates and exhibit his personal level of expertise was a big boost to his self-esteem. For some of the other children, this was their first opportunity, and they delighted in the attempts to "land a big one." I don't think anyone brought home supper that day, but they sure tried!

As a parent, I was most pleased to see Alex's school recognize the importance of learning outside the classroom. The course was also a nice weekly reward for the children to anticipate.

Fishing has an important place in our recreational endeavors; now for our nine-year-old, it has a place in his overall academic studies.

Sandy Mille



Ice fishing for sunfish may not be any more or less productive than it is during daylight, but it certainly is different, for obvious reasons. If you like night fishing, if you don't like crowds, or if you just cannot find the time to get out on the ice during daytime, here are some tips that will help you enjoy the fun of ice fishing for sunfish at night.

Finding fish

We could discuss various formulas for locating sunfish, but the fact of the matter is that the most logical way to find sunfish at night is to locate where anglers were catching them during the day. It's the easiest way to go, and it is also the safest. Nighttime is no time to go exploring on the ice! Your local bait and tackle shop should be able to steer you toward some good sunfish areas.

Once on the ice, look for holes that show the most signs of activity, such as blood stains, pieces of bait, and other scraps that indicate someone spent a lot of time there. The same holes can be used if the weather is warm enough so that the holes do not freeze before you get to them. You can reopen the holes with an ice spud, but never try to reopen holes with an ice auger, because this is murder on auger blades.

Drill your holes through the cleanest, least blemished ice you can find. Most sunfish anglers fish with two rigs, through two holes. The two holes should be three feet to eight feet apart. Any farther apart and you cannot properly control your rigs. You should be able to reach both your fishing rigs from a central sitting position. Regulations require that all lines, rods, and tip-ups be in your immediate control.

Gearing up

Equipment is a key to successful nighttime ice fishing. Start with a set of ice cleats. Cleats that strap onto boots are inexpensive and available at most tackle shops. Ice seems more slippery than ever at night. The ice cleats add to your mobility, and they might prevent serious injury.

Remember, all problems are magnified in the darkness!

Dress warmer than seems necessary. You can always shed some of your clothing, but you cannot add



The standard set-up for sunfish is a tiny jig tipped with a grub.

something that you left at home. The temperature nearly always drops as the night goes on. You will not have a pleasant ice fishing experience when you are cold and uncomfortable.

There is no way to keep the hands dry while catching fish, and wet hands chill fast. Keep a towel handy to dry your hands, but they will still get cold. A hand warmer is a luxury that nearly rates necessity classification. Same goes for a spare pair of gloves.

A good lantern is also a must. The lantern guides you out onto the ice, lets you see what you are doing when you get where you are going, and may even attract sunfish. The Coleman

lantern sets the standard for night ice anglers. Battery powered lanterns are a poor choice, because batteries do not hold up very well in cold temperatures. Furthermore, the heat generated by a liquid-fueled lantern is very welcome during a cold night.

The sunfish angler needs something to carry tackle in, and something to carry fish in. One of these items also serves as a seat, and the other as a stand for the lantern. A couple of five-gallon plastic buckets do just fine. Even better is a Sport Seat, made in Lititz, PA, by the Woodstream Corporation. This comes in a variety of configurations, including a





strapped version that is carried over the shoulder. A handy set-up like this makes it a lot easier to carry your tackle, especially at the end of the outing with the added weight and bulk of your catch.

Choosing your tackle

Sunfish tackle need not be elaborate or expensive. A pair of rods can be purchased for about ten bucks, though you can, of course, pay more. The style of rod is unimportant, and a reel is unnecessary. A typical sunfish ice rod is about three feet long with a device on the handle for line storage. The line storage device is usually a

couple of pegs to wrap the line around.

Sunfish may be line-shy. Use four-pound or two-pound line. Sunfish are small. It is unlikely that you will ever catch a Pennsylvania sunfish weighing as much as two pounds (except for bass, which are members of the sunfish family). Still, when using light line it is very important to tie good knots. It is also wise to retie your knots after catching about a dozen fish.

The standard terminal set-up for sunfish is a tiny jig tipped with a grub. Jig color is not important while fishing at night. Some anglers like jigs with reflective finishes, reasoning that these jigs may catch some of the lantern light. Teardrop jigs are as good as any. They are available at most tackle shops that cater to ice anglers.

It is important to carry a few different sizes of jigs. This is most important if you fish in more than one lake or pond. Sunfish come in various sizes and species. Larger sunfish call for larger jigs, and vice versa. Numerous missed hits are an indication that the jig you are using is too big. It can also indicate that you have too much bait on the jig.

After one winter of testing scents, it is apparent that scents can make a difference. Most noticeable was the improved hit-to-hook-up ratio when the jigs were juiced up. Scented jigs without bait caught as many fish as baited jigs without scent. Carry scents close to your body to prevent their freezing.

The question of bait boils down to what is available in most areas. Minnows, even tiny minnows, are too large for all but the largest sunfish, meaning slab crappies. Grubs are the best all-around bait for tipping sunfish jigs. Maggots, mousies, mealworms, and waxworms are the most frequently available types. Maggots may be the best of the lot.

Sunfish are notoriously light hitters. A feisty crappie might occasionally hit your jig so hard that it nearly jerks the rod out of your numb hands, but that is the exception. Far more hits go undetected, and more often still the sunfish sucks the lure into its mouth and then rejects it before the angler has time to react. Two devices are commonly used to detect light sunfish

hits: bobbers and springs.

Springs are attached to the end of the rod. They bend much easier than the lightest rod, signaling the faintest hit. The tip of the spring is usually painted a bright color or adorned with a bright bead to make even the slightest spring movement more visible.

Bobbers are just as effective, but keep them small. Do not wait for the sunnie to pull the bobber under. Set the hook as soon as you see the bobber wiggle. There are some bobbers made specially for ice fishing, spongy so they can be cleaned of ice by squeezing them. Special lighted bobbers are a big help to the night angler, too.

Working the lure

Presenting the lure to the sunfish is no more complicated than the gear. Most ice fishing for sunfish is done in water less than 12 feet deep, most often about half that depth. It may be important to present the lure at precisely the right depth. Experiment with depth until you get a hit, then keep the lure at that depth. The light of the lantern sometimes draws fish very near the ice, so experiment from top to bottom.

Do not give the jig a lot of action. Most hits come as the jig rests motionless. Give the jig just a slight wiggle every few minutes, more often if it appears that the movement is turning the sunnies on. Crappies sometimes like a jig that moves a lot, but a lot for sunfish may be merely trying to hold the ice rod steady in your own hand. The best action for bluegills or pumpkinseeds can be a little vibration applied by thumping the rod with a finger as the rod rests on the ice.

A large portion of the natural food eaten by sunfish is made up of tiny animals that are weak swimmers. The movements of these critters is measured in millimeters. Most often the best course of action is to lower your baited or juiced jigs into the water and do nothing until the spring bends or the bobber wiggles.

Nighttime ice fishing for sunfish is not difficult, and it sure is fun.

Remember, safety first, comfort second—then with a small amount of tackle and a good sunfish lake you are ready to get in on the action.

The Commission Law Enforcement Division has six regions, each headed by a supervisor. Here's a close look at these officers.

Six Regional Supervisors

by Bill Porter





photos by Russ Gettig

ortunately for the good guys, or unfortunately for the bad guys, the Fish Commission's Law Enforcement Division is a vital and integral part of the whole agency. Charged with a variety of responsibilities ranging from enforcement of fish and boat laws to pollution problems and beyond, Law Enforcement is a busy, busy outfit.

To make this division effectively functional, obviously, organization is needed. The chief of Law Enforcement is Edward W. Manhart. The deputy chief is Perry D. Heath, and supervisor of deputies is James R. Smith. The link in the chain of command between these men and the field officers is the regional supervisors. Through this group, this article presents a profile of the state's diversity of waters and terrain features and the Law Enforcement Division at work.

A regional supervisor is assigned to each of the Commission's six areas—an over-simplified statement. Concentrations of population, geographic features, climatic factors, industry, variable water resources, and other considerations compound simply saying "six areas."

The supervisors also show backgrounds as diverse as the regions they manage. One was a professional baseball player. Another is a college graduate. Others had military experience in the Korean conflict.

There is common ground running through all these variables. Initially, each officer achieved his present post by earning it up through the ranks of field officers to assistant supervisors and finally to regional supervisors. They also have had matching training within the Fish Commission's program, honing their skills in management, first aid, boating, self-defense and firearm use, pollution detection, additional law enforcement training, and other courses that were developed or for which there was a need. Now from this position of sameness, here are the regional law enforcement supervisors and their districts in a clockwise pattern, beginning with the Southeast Region.

Southeast Region

Robert J. Perry heads the Southeast Region, bringing 22 years of Commission service to his present position. Perry served as waterways patrolman in



Robert J. Perry

Columbia, Montour, and Northumberland counties from 1965 to 1973. From that point to 1985, he was the assistant regional supervisor of the Northeast Region. He is completing his second year as regional supervisor.

Perry has 13 waterways conservation officers, 100 deputy officers, and 2 support personnel in his command, which covers 10 counties and borders New Jersey, Delaware, and Maryland.

"We service about 1,100 miles of stream fisheries and over 24,000 acres of lakes, including the Conowingo, Safe Harbor, and Holtwood dams," said Perry.

In spite of population concentration over the southeast corner of the state, Perry thinks that there are many miles of the Delaware, Susquehanna, and Schuylkill rivers that are underfished and available for expansion of activities.

Perry sees his supervisory role as maintaining a contingent of well-equipped and informed officers. The accountability of the field officers to the public, to the regional office, and to Harrisburg is paramount.

"We have some problems that we deal with as quickly and smoothly as possible when they occur," said Supervisor Perry.

Property violations, fishing without licenses, lack of PFDs, vandalism, pollution, and crime code violations are among the negative issues that Perry and his officers face from time to time.

On the plus side, the regional supervisor thinks that fishing in the Phila-

delphia area is on the increase and improving through a variety of state, private, and municipal efforts. Future prospects on the Susquehanna, Delaware, and Schuylkill rivers look promising, particularly the shad restoration in the Susquehanna.



Frank Schilling

Southcentral Region

Frank Schilling is the southcentral regional supervisor with 18 years of Commission experience, having first been assigned to the Philadelphia district in 1968. Following a 15-year stint there, he was promoted and transferred to the Southcentral Region as assistant supervisor and became supervisor following Richard Owens's retirement.

Schilling supervises 11 field officers, 64 deputies, and two support personnel in an 11-county district in the center of the state, bordering Maryland.

"We have in excess of 18,000 miles of fishable streams with heavy emphasis on trout and 15,000 acres of lakes, including Raystown Dam at 8,300 acres," said Schilling.

The region contains top bass and musky waterways in the Juniata and Susquehanna rivers, stripers in Raystown, and fabled limestone trout waters in Cumberland County and elsewhere.

There are also fine boating opportunities from canoeing to sailboats and large motor-powered vessels on the region's major lakes and rivers. "Some of the best fly fishing waters in the state are in the Southcentral Region," he said.

Although not as populated as the

southeast, there is an urban swell in the Harrisburg area. Elsewhere, the region runs from rolling farmland to totally mountainous counties in its western and northern extremes, providing a wide range of stream styles and coldwater and warmwater lakes.

By assignment and volunteering, the Southcentral Region staff has become a focal point for creating display units for sports shows and other activities. Schilling has personal expertise in cabinetry and is directly responsible for many of the project units.

Common enforcement problems include fishing without a license, littering, and failure to have proper PFDs while boating.

Schilling's army experience as a military policeman has provided some effective background for his post as regional supervisor.

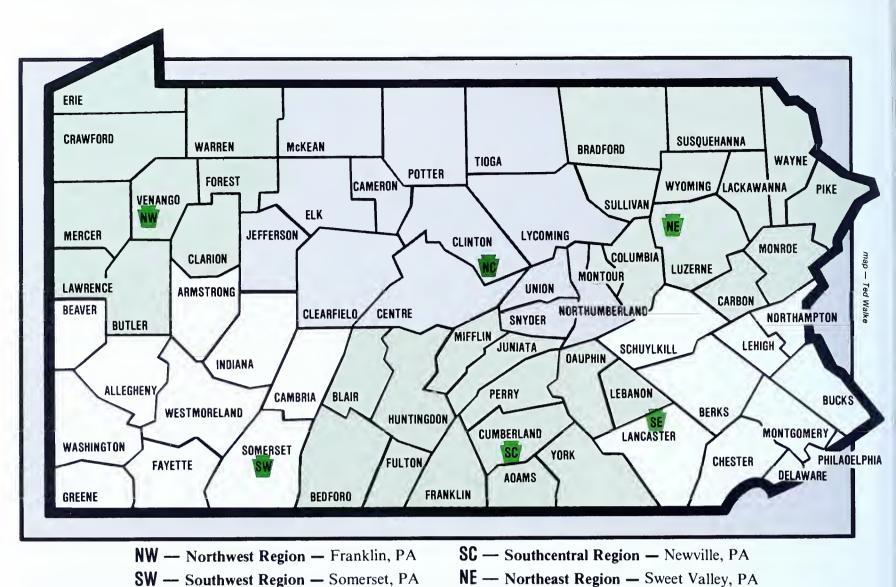


Thomas Qualters

Southwest Region

Thomas Qualters holds the supervisor's position for the Southwest Region with 22 years of Commission service. His first assignment was to Cambria County in 1965. Promoted in 1967 to Southwest Region assistant supervisor, Qualters became the regional supervisor of that district in 1972, a position he still retains. His background before the Fish Commission? Well, it was a bit different—he had 9½ seasons with the Pittsburgh Pirates as a pitcher.

Qualters oversees 12 district officers, 84 deputies, and three support personnel who cover 10 counties in the



southwestern region. The area borders Ohio, West Virginia, and Maryland on the south and has the highest concentration of license buyers and boat registrants of any of the Commission's six regions.

NC — Northcentral Region — Lamar, PA

Coolwater species, particularly walleye, the pikes, and bass, seem the most popular game species for the region. Trout come in a somewhat distant third, following after the warmwater varieties.

"The three-rivers system—the Ohio, the Allegheny, and the Monongahela provide excellent coolwater species fishing and boating opportunities," Qualters said.

Pollution is a major concern with some movement to improve water quality and restore marginal streams to viable fisheries. Mine drainage and acid precipitation are the two major offenders, but the supervisor indicated that steps seem to be leading in the right direction for betterment of the region's waters.

"I am most concerned about the effect of acid rain on the Laurel Mountains—it could be serious. If it is

controlled, I see cool and warm waters remaining the same as they are and the coldwater streams improving," Qualters said.

SE — Southeast Region — Elm, PA



Northwest Region
Walter Lazusky is the regional super-

visor in the Northwest Region. In his 27th year of service, he began his career as a district officer in Lackawanna and Susquehanna counties in 1960. Promoted in 1965 to assistant regional supervisor of the Northeast Region, he reached his present position as regional supervisor in 1973.

"I have taken all the available inhouse Commission training courses, but I had some experience that has helped along the line. I served with the Sixth Marine Division in China in 1945-46," he said.

Lazusky supervises 12 district officers, 64 deputies, and two support personnel. The region is bound on the west by Ohio and Lake Erie and New York on the north. Nine counties are part of this territory, including heavily forested areas and the flat drop around Lake Erie.

Warmwater fishing ranks number one in the region with excellent fishing provided by most of the lakes and impoundments. Coolwater species come next with Lake Erie a center attraction with the salmon and steelhead runs coupled with the bass, walleye, and

panfish. Coldwater fishing ranks third with fine trout streams in several counties. A breakdown of water sources shows 985 miles of streams and a huge 682,172 acres of lakes, including Erie, Conneaut, Arthur, Pymatuning, Kinzua, and others.

Many lakes and certain rivers have unlimited horsepower for boats.

"Anglers take advantage of yearround fishing and are generally appreciative of the Commission's programs in the area—the salmon fishing, for one," he said.

Oil and gas well drilling and the discharge of brine fluids are major concerns in parts of the district and require monitoring by the region's officers. There is some coal mining that also needs periodic observation for pollution. However, according to the supervisor, conditions are improving and for the most part industry is cooperating in protecting the environment.



Paul F. Swanson

Northcentral Region

Paul F. Swanson is this region's supervisor, with 19 years of Commission experience. He began his career as a field officer for Centre County, moved to western Erie County, and eventually served as watercraft safety officer, Northwest Region. A promotion to assistant supervisor, Northcentral Region, was followed by his appointment to supervisor of that region, a post he has held for the last nine years.

The Northcentral Region borders New York and cuts a Texas-shaped wedge south through the center of the state. Swanson has 12 waterways conservation officers, an appropriate deputy force, and two support personnel to handle the 12-county district.

The Northcentral Region is the largest by land area in the state; it is also the least populated. "Working in the Northcentral Region is a pleasure because of the many beautiful mountain streams and settings," says Swanson.

Coldwater fishing is number one with 1,400 miles of stocked trout streams, 900 acres of trout-stocked lakes, and thousands of miles of nonstocked trout waters, containing wild populations of brook and brown trout. Coolwater species, walleye, and bass, are in second place with reduced areas for this fishing compared to trout waters. Warmwater species follow—the Allegheny Reservoir, Hills Creek Lake, and the Susquehanna River are a few of the warmwater spots. Canoeing is a growing sport in the region, particularly during April, May, and June. Pine Creek, the West Branch of the Susquehanna, and the Loyalsock are three key areas for this activity.

Environmental problems exist: strip mining in Clearfield and Jefferson counties; oil and gas activities in McKean, Elk, Jefferson, and Clearfield counties; logging operations on some headwaters; and acid rain as a major concern over the entire region.

For the future of the Northcentral Region, management of wild trout and stocked trout will be the prime concern of the law enforcement officers working the district.

Northeast Region

Completing the circle, Kerry L. Messerle is the supervisor of the Northeast Region. He brings a wide range of Fish Commission experience to his job plus a bachelor of science degree in wildlife biology from Colorado State University. His Commission career began in 1974 as a waterways patrolman and boating safety officer in the Northeast Region. Then it was on to Lancaster County as a district officer. In 1980-81, he served as deputy coordinator at the Harrisburg headquarters, where he became deputy chief of the Law Enforcement Division. The move to regional supervisor came in 1983.



Kerry L. Messerle

The Northeast Region borders New York and New Jersey. Messerle has 11 district officers, 60 deputies, and two support personnel to manage the 12-county area. The region has a high transient "summer" population as well as at peak fall periods; otherwise, the resident population is relatively low. Scenic mountain ranges, streams, and lakes make the area attractive for a great variety of activities.

Coldwater species rank first in popularity and opportunity. According to Messerle, there are 16,700 acres of stocked trout lakes and 684 miles of trout streams available. There are several large lakes that hold trout and other gamefish—Lake Wallenpaupack, for one. There are also 120 miles of the North Branch of the Susquehanna River for bass and walleye and 130 miles of the Delaware River for similar species plus an active spring American shad run.

Messerle sees some problems that need attention. There are still some discharges from old mining operations. Some of the smaller communities have not yet hooked up to adequate sewage treatment facilities. The fast-growing "summer home" population in some counties taxes facilities and requires more patrol hours for fishing and boating violations. Littering by individuals and groups of people is a major concern, requiring constant attention by Messerle and his officers.

"These issues are not insurmountable; they just have to be dealt with properly in a diplomatic but firm manner," he said.

Need relief from the winter doldrums? Check out these prescriptions.

24 Cures for the Winter Blahs

by Sam Everett



fter cold weather has set in for a while, I begin to hate winter. Short days, snow, ice, cold temperatures, bare trees, and snowladen trailered boats make me yearn more and more for spring.

You too? Even though winter has just begun, I've found an Rx for the winter blahs—medicine that lasts all season long, even if the harshest snowstorms, thickest ice, and coldest temperatures are yet to come.

Here are 24 prescriptions to get you through the winter. Take these cures, some general and some specific, and warm fishing weather won't be a long wait away.

Plan a Lake Erie charter boat fishing trip. Decide what you want to fish for and get started with calls to captains for their rates and services. Good charter dates can go quickly, so now is not too early to book a trip for the upcoming season. Need the names of a few charter boat captains? Start with the yellow pages of the Erie phone book, and if you live out of that area, call directory assistance and ask for the yellow pages operator. The listings appear under the heading "Boat-Charters."

2 Clean and lubricate all your reels. Be sure to use a top-quality grease and the correct oils, and make sure you put all the parts back together in their proper places. If you don't have the owner's manual for your reel, consult the manufacturer for a copy.

3 Repair your lures. Look for broken and bent hooks, and loose, rusted, or worn hardware.

A Sharpen the hooks on your lures. The most successful anglers never use a hook without sharpening it because honed hooks catch more fish.

5 Replenish your fly tying supplies and equipment, and tie a lot of flies. How about looking into a few new patterns to tie now for use on opening day and early in the season?

6 Find new fishing spots to try this spring. Make calls or take trips to bait and tackle stores for information.

7 Inventory your fishing tackle so that you know exactly what you need. This strategy lets you get the most for your money. Study the spring catalogs and winter clearance catalogs of mail order firms for good deals.

Maintain your boat trailer. You're looking for trouble this coming season if you didn't repack the wheel bearings last fall, and check out the trailer for signs of rust and corrosion. Make sure the rollers or pads are set properly, lubricate the rollers, and be sure to tighten all the frame bolts.

Unravel and inspect the winch line, too. If there's any sign whatsoever of your winch rope fraying, replace it.

Make these repairs now, because waiting for spring can allow small problems to become big ones, which could delay your getting on the water.

Maintain your engine. You could probably still get it winterized now if you neglected this job last fall, or you could still do it yourself. If you're not sure how to tend your motor, take it to a dealer. As spring approaches, you will probably find a long waiting period for service at marine suppliers and boat dealers who have the best maintenance facilities.

10 Fix up your boat. Get going on any customizing projects, and tackle any new wiring or new equipment installation. Inspect the hull for damage to the fiberglass, and if your boat is aluminum, check for loose rivets.

11 Inspect all your boating equipment. Repair, maintain, and replace items as necessary. Check out your PFDs and other required safety items, anchor line and hardware, mooring lines, cleats, lights, electronics, cables, livewells, and pumps. Do this task now so that if

you have to wait for delivery of ordered parts, you won't be waiting this spring when you want to be on the water.

Check the date on your flares, and replace them now if they no longer can count toward the legal requirement. Don't toss them, though, because even if they can't count toward the legal requirement, they will probably still work.

12 Be sure all your licenses and registrations will be up to date when you want to get on the water. Know when you should receive the yearly renewals so that if they do not arrive when you expect them, you can still ensure your getting on the water on time.

Along these lines, get your 1987 fishing license now, and look for your boat registration materials to arrive in the mail sometime in January or February.

13 Update your Lake Erie or Delaware River navigation charts. Get a list of the latest charts and place your order now for new charts. Nautical chart prices went up in June 1986, so be sure you have current ordering information to avoid a delay in your receiving charts. If a dealer isn't close by, you can obtain charts by contacting: Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Request Nautical Chart Catalog l with ordering information.

14 Respool the line on all your reels, and stock up on line so that you can change it as needed during the season.

15 Similarly, tie up some fly fishing leaders in a variety of lengths and strengths.

16 Make other rigs and leaders for the species you seek so that you're well-stocked when the season begins.

17 Go to boat shows, fishing expos, and other outdoor sport shows.

18 Take a boating skills or safety course. The U.S. Coast Guard Auxiliary, U.S. Power Squadrons, and the American Red Cross offer courses on a variety of boating topics from handling canoes to handling 65-footers.

To contact the American Red Cross, consult the white pages of the phone book. The Coast Guard



Take these cures and warm fishing weather won't be a long wait away.

Auxiliary will be listed in the blue pages of the phone book in the U.S. government section under "Coast Guard." The national headquarters of the U.S. Power Squadrons is at 1504 Blue Ridge Road, Raleigh, NC 27622.

Build a fishing rod. Buy a kit, or get separate components. There are plenty of books, videos, cassettes, pamphlets, and even seminars and courses, so there's no excuse not to begin building your magic wand. You'll find these sources in tackle shops and mail-order catalogs.

20 Join a conservation organization and become involved in its activities and programs.

21 Browse in bait and tackle shops and marine supply stores as soon as the roads are clear on the snowiest days.

22 Read a good fishing or boating book or two. One good one is *Pennsylvania's Basic Boating*, the Fish

Commission's 84-page book on the rudiments and requirements for Pennsylvania boaters. It's available postpaid for \$1. Make checks or money orders payable to Pennsylvania Fish Commission, and send orders to: Boating, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

23 Go ice fishing, but if you're new to this sport, go with a veteran who can show you the ropes.

Lastly, if you can't find a few cures for the winter blahs from this list, then your particular case has no cure.

24 Oh wait—I forgot one remedy that works when all else fails: Go fishing right now. There are special regulation areas open to year-round fishing, and the action in some spots can be encouraging. Consult your summary of fishing regulations and laws for information on where to wet your line.





Pickerel

Eight pickerel were caught that earned anglers awards, and all were taken on tip-ups. Three were caught at Promised Land Lake, and one each came from the Weissport Canal, Lake Wallenpaupack, Walker Lake, and Minsi Lake.

One was hooked in December 1985, five were caught in January 1986, and two were taken in March, 1986. All fell for a shiner or a minnow.

Chain pickerel must be four pounds (senior) or three pounds (junior) to qualify for an Anglers Award.

Northern pike

The five northerns that rated Anglers Awards were all caught on tip-ups. Three took shiners, one attacked a minnow, and one was fooled by a sucker.

Two pike were caught at Sugar Lake. Glendale Lake, Shawnee Lake, and Lake Arthur accounted for one pike each.

One was caught in January 1986, and the other four were taken in February 1986.

To qualify for an Anglers Award, northern pike must be at least 12 pounds (senior) or seven pounds (junior).

Largemouth bass

Of the 106 largemouth bass that qualified anglers for awards, all were taken on tip-ups baited with shiners, except two—One was caught while jigging, and the other was caught on a tip-up with a sucker as bait.

Middle Creek (Lancaster County), Montour Preserve Lake, Hopewell Lake, Pinchot State Park Lake, Lake Silkworth, Glendale Lake, and Yellow Creek State Park Lake accounted for one largemouth bass each. The rest were caught at Lake Arthur.

In December 1985, 15 largemouths were caught for citations. In January and February 1986, 36 were taken during each month, and in March of that year, 19 bass were caught.

For an Anglers Award largemouth bass must be at least five pounds (senior) or four pounds (junior). You can obtain complete details on the Commission's Angler Recognition Program by sending requests to: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. Please include a self-addressed, stamped business-sized envelope with requests

PA



The Deerfly

by Chauncy K. Lively

photos by the author

I've always thought that of all the insects which feast on human flesh, deerflies are the sneakiest and most insidious. When a mosquito bites, it produces a stinging sensation to announce its presence, alerting the victim to counter with a healthy swat. But not so the deerfly. It arrives unannounced and one is generally unaware of its presence until blood is seen dripping from an exposed arm. Some people, including my wife, Marion, are allergic to deerfly bites, and they often react spectacularly. I'm convinced that if there is a deerfly within a half-mile it will find her and the result is always the same. On several occasions, we returned from camping/fishing trips when her eyes were nearly swollen shut or her cheeks resembled a case of mumps—all the handiwork of deerflies.

So it was with a sort of vicarious gratification that I found that trout eat deerflies when they are available. We were fishing one of the upper meadows on Falling Spring when I was bitten by one of the little beasts, then another. Then I realized that there on a willow-shaded pool were quite a few deerflies. For whatever reason such creatures become waterborne. Trout picked them from the surface with regularity and at the demise of each I found myself muttering, "Serves you right!"

Now, I'm not usually a vengeful person, but one can be pushed beyond

ordinary limits.

I pawed through my fly box in search of an appropriate pattern and settled for a "near-enough"—a small, dark dry fly with swept-back spent wings. It worked reasonably well and each time a trout took it I experienced a feeling of revenge, akin to hanging an effigy. That was several years ago and I vowed then and there to invent a specific deerfly pattern that would do justice to my admittedly psychotic regard of the little winged pests. It didn't take long.

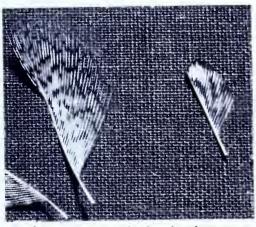
Deerflies are dipterans of the large Tabanidae family and are related to horseflies. The adults are easily recognized by their patterned delta-shaped wings and dark bodies. The females lay their eggs on weeds, logs, or other structures overhanging streams. After hatching, the panetella-shaped larvae drop into the water, where they often occupy swiftly flowing riffles. Mature larvae leave the water and burrow in the stream bank, where pupation occurs. Except in isolated instances—such as our encounter with them in quantity on Falling Spring—the incidence of deerflies on the water is generally about equal to that of most terrestrial insects during the summer months. But we all know of the reliance of trout on the sundry insects after the hatches of aquatics have waned, and patterns representing a variety of these are an important segment of the dry fly box.

Our deerfly pattern is dressed fore-

and-aft, i.e., with hackle wound at both the rear and front of the body. The body itself is made of wound peacock herl, dressed fully. The Loyalsock-type wings are perhaps the most distinctive feature of the pattern, and their construction warrants discussion. We described Loyalsock wings in the November 1984 Angler ("The Palmer Potamanthus Dun"). Here we used a matched pair of grouse breast feathers and strip away all the fibers from opposite sides of the two feathers, creating a right and left wing. They are then shaped and when dressed, the bare, stripped sides of the ribs form the leading edges of the wings. They are positioned flat over the body-ribs on the outsides—and tied in by their stems. Then they are wound between with figure 8 turns to achieve a delta shape.

Sometimes the stems of these feathers are "out of round" and refuse to be bound flat. In this case, bend the stems outward slightly so that when they are placed together the wings assume the desired angle. Then cement the stems together and when dry, the wing pair may be tied in as a unit. I dress the pattern in both size 16 and 18.

I gave considerable thought to naming the deerfly pattern "Chaunce's Reprisal," but somehow that had a mean, nasty ring, completely out of place in the gentle sport of fly fishing. So we simply call it what it is—the Deerfly—and I silently continue to vent my ire on the little demons with every trout that takes the pattern.



From a matched pair of grouse breast feathers (left), strip the fibers from opposite sides of the ribs. Trim or burn the Loyalsock wings to shape (right), in a length equivalent to that of the hook shank. Optionally, spray the wings with Tuffilm and set them aside to dry.



Clamp a fine-wire hook in the vise and tie in black 6/0 prewaxed thread at the bend.

Select a grizzly hackle with barbs about 1½ times the hook gap length.

Tie it in at the bend with the glossy side facing the eye. Wind the hackle in close turns and tie it off. Then, as shown, trim the hackle above the shank.



Tie in three strands of peacock herl by their tips in front of the hackle. Then wrap the working thread around the herl for a length of about 3 inches.



Wrap the thread-entwined herl forward to form a full body. Tie off and trim the excess herl.



Tie in the wings flat over the body (top view) with straight edges on the outside. Then select one each, brown and grizzly hackles similar in size to the rear hackle. Tie in the hackles together in front of the wings, with the dull sides facing the eye.



Wind the front hackle and tie it off; then wind the second hackle through the first and tie it off.

Trim the excess hackle tips, as shown. Finally, whip finish the thread at the head and apply head lacquer.

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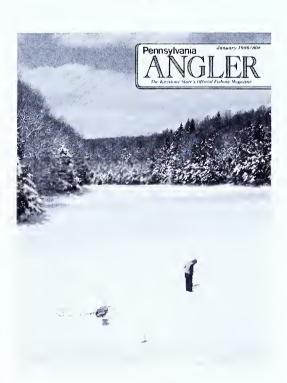
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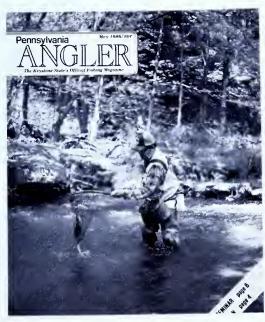
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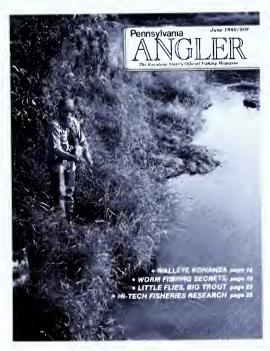
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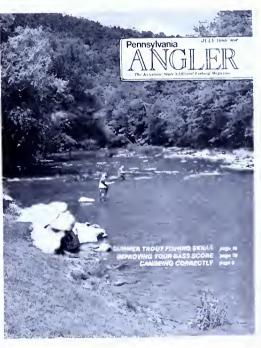
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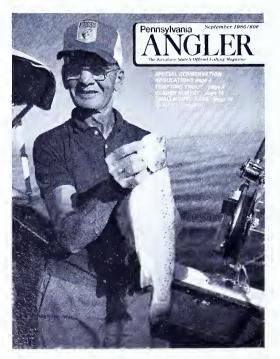
Shad-taking techniques. Wonderlich, Dave. May 20-22.

SNYDER COUNTY

County features — Clarion and Snyder counties. Mulhollem, Jeff. Nov. 22-27.

SPINNERS

Fishing spinners for big trout. Sawyers, Mike. Apr. 6-8.



STEELHEAD

Pennsylvania's steelheads: Where, when, and how anglers catch them. Michaels, Art. Oct. 25.

Streams of steel. Beckman, Chuck. Oct. 22-24.

SULLIVAN COUNTY

County features — Sullivan County. Osgood, George. Nov. 22-27.

SUNFISH

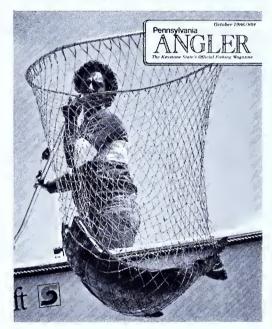
Nighttime sunfish. Bleech, Mike. Dec. 7-9.

TIOGA COUNTY

County features — Montour, Columbia, and Tioga counties. Weaver, John W. Oct. 26-29.

TROLLING

Trolling live bait for muskies. Bleech, Mike. Sept. 24-27.



TROUT

Backpacking in for wilderness trout. Wonderlich, Dave. June 6-9.

Comparative trouting: Penn's Woods vs. the Mother Country. Slaymaker, II, S. R. Jan. 6-8.

Fishing spinners for big trout. Sawyers, Mike. Apr. 6-8.

Low-water trout. Wonderlich, Dave. July 16-17.

November trout. Wonderlich, Dave. Nov. 9-11.

September trout tactics. Murray, Harry W. Sept. 6-9.

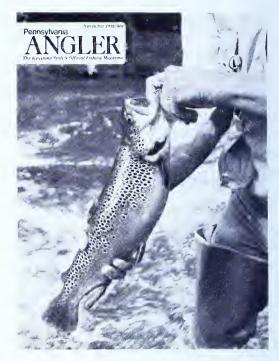
The brown trout: Immigrant from the old world. Shaffer, Larry. Sept. 30-31.

Trout angling success with nymphs. Rothrock, Dave. Apr. 23-25.

Trout are what they eat. Corl, Kenneth G. Mar. 23-25.

Trout stocking in 1986. Apr. 9.

Winter trout fishing. Murray, Harry W. Dec. 23-25.



WALLEYE

A Pennsylvania walleye fishing seminar. Black, Darl. May 6-10.

Chasing walleye under the ice. Bleech, Mike. Feb. 7-9.

Ohio River walleye. Bukowski, Thad. Mar. 20-22.

10 tips for late-fall walleye. Black, Darl. Nov. 6-8.

Three ways for Lake Erie walleye. Beckman, Chuck. June 16-18.

WASHINGTON COUNTY

County features — Greene, Washington, and Beaver counties. Haas, Les; Jacobs, Gregory A. and Small, Keith E. Apr. 14-19.

WATERWAYS CONSERVA-TION OFFICERS

The "new" waterways conservation officer. Porter, Bill. Apr. 20-22.

WAYNE COUNTY

County features — Lackawanna and Wayne counties. Scharadin, Dennis. July 22-25.

WEATHER

Downbursts are dangerous. July 13. **WESTMORELAND COUNTY**

County features — Armstrong and Westmoreland counties. Svetahor, Emil J. and Mahn, John. June 10-15.

WORM FISHING

16 worm fishing secrets. Dolnack, Chris. June 19.

WYOMING COUNTY

County features — Wyoming, Clinton, and Jefferson counties. Shabbick, Steve; Johnston, Jay B. and Duvall, Porter. Aug. 14-19.

YELLOW BREECHES CREEK

Good sportsmanship mends fences. Plowman, Wendy. Oct. 4-5.





Winter Trout Fishing

by Harry W. Murray

There is no single magical key to successful trout fishing. There are many small aspects that separate success from failure. This idea applies throughout the season, but it becomes most important during the winter. Many of the problems that you faced all season are still present, but as the temperature drops, you find additional challenges. These different circumstances affect both the angler and the trout, and the ability to evaluate these changes correctly and properly adapt to them can be measured by your catch.

The first part of this game to consider is your personal comfort and safety. Wading a trout stream in mid-winter presents the angler with problems not encountered in some other winter sports. You're not as active as the cross-

country skier, so you're compelled to make a greater effort to retain body warmth. However, the bulky suits of the snowmobilers would restrict your movements far too much to permit crawling and sneaking about trout streams. You need to compromise.

First layers

Polypropylene underwear is perfect as the first layer of clothing. In very cold weather, I like the double-knit bubble style. In moderate weather, the single thickness is fine. Over this I wear wool slacks and a wool shirt. In very low temperatures I wear a wool sweater over the wool shirt.

Coats of down or some of the modern synthetic fillings are excellent as long as they do not severely restrict your movements. It is important that the outside shell of the coat be reasonably waterproof because snow and cold rain can have such a drastic chilling effect. The new breathable waterproof fabrics are good if the seams are properly sealed.

I strongly suggest purchasing this type of garment from a company that will stand behind it. The first two I used were not seam-sealed properly and I got soaked in moderate rains. Furthermore, I want my coat to have a hood, even if it is only lightweight. Under this I use either a wool hat or knit Balaclava cap that I can pull down over my face if the temperature drops or the wind gets strong.

Footwear

Footwear is very important. I usually wear one pair of light wool or silk socks under a pair of thick wool socks. Insulated hip boots and waders are worth

the money if you plan to do much winter fishing.

Beware, though—the same felt soles that were so great last summer can be the cause of a serious accident in icy conditions. The felt freezes as soon as you get out of the water and acts much like skis on frozen ground or icy rocks. Regular cleated soles are much better, and the aluminum barred stream cleats are the best of all.

Hands

Cold hands often stop the winter angler quicker than anything else. This is a two-phased problem; when the hands get wet, the evaporation of the moisture produces a direct loss of heat through the skin in that area. Additionally, the cold air has a direct chilling effect on the hands even if they are dry. In order to compensate, I work on each problem separately. I wear disposable vinyl gloves under wool fingerless gloves. The vinyl gloves keep my hands dry, and the wool gloves hold in the natural body heat.

Small hand warmers are great. I like the solid-fuel type, but the liquid fuel or chemical heating kinds are good, too. They help thaw out stiff, cold hands very well. I carry mine in my inside shirt pocket, and I believe it helps keep my body warm. This notion may be more psychological than physical, but I've been doing it this way for over 10 years and I plan to continue.

Another gadget that helps greatly during the winter, especially on freestone streams, is a wading staff. It doesn't directly keep you warm, of course, but it may enable you to stay on the stream longer. Last winter I slipped in 34-degree water and got a bootful. This chilling experience ends your day quicker than anything else I know.

It is very important to have a complete change of clothes in the car in case you do happen to get wet, and it should include an extra sweater or two and a warm coat. I don't fish any stream during the winter, no matter how close to home, without my "fall-in bag."

Stream bank cautions

Even with the ideal footwear, it is still very important to use extra caution as the air temperature approaches freezing. When wading freestone streams during the winter, it is usually best to stay in the stream as much as possible. You know what to expect there, but



When water temperatures in streams go below 40 degrees, try your luck with nymphs and streamers. At right is a selection of flies that are good for winter stream action.

water splashing on stones along the bank can freeze quickly and they can become greased cannonballs when you try to walk on them.

The worst part about walking right at the stream edge during these conditions is its inconsistency. The kind of rocks, amount of water splashing on them, the temperature, and shade all affect footing.

Spring creeks present their share of problems when considering a safe footing in the winter. Low night temperatures often cause the ground to freeze, but the warm sun causes a slight thawing right on the surface. When this happens in an area of little or no sod cover, it can produce a dangerous situation. A sloping clay bank of only three feet wide can be a real killer.

If you have a choice, always try to avoid walking on ice along any spring creek, unless you know the stream well. If it is solid it can be very slippery and you can easily slip and hurt yourself by

falling on it. If it is thin and over deep water you can easily break through and get wet. If it is thin and over shallow water you can easily break through and tear your boots or twist your ankle. For these reasons, it is best to approach all streams slowly and cautiously during the winter.

Ice and casting

Strong winter wind can affect your casting as well as chilling you. If you cast with your right hand, the easiest way to compensate for a strong wind is to position yourself so that the wind blows over your left shoulder from slightly behind you. If getting into this position is not possible, simply try to keep your cast tight and low; the wider your loop and the higher your line is flowing, the easier it is for the wind to affect it adversely.

Having the line freeze in the guides is an ever-present winter problem. The simplest solution is to stick the rod in



the water and swish it back and forth to remove the ice. This works, but it is a short-lived solution because the water you pick up starts freezing in the guides, and more water carried by the fly line through the guides will quickly plug them again.

A longer-lasting solution, although it is more time-consuming, is to coat your rod, guides, line and even part of your leader with a thin layer of silicone cream. This helps greatly, and I usually repeat it several times a day on the stream, if needed. The reason this works so well is that it does not allow the water to stick to the line, rod, and guides as easily as it would otherwise. Look at your car hood the next time you drive in a rain after waxing it, and you'll see a similar situation.

Tying knots with numb fingers is always a problem, so use the simplest good knot you know for a specific purpose. You may want to use a double surgeon's knot in place of a blood knot. Another solution is to use more loopto-loop connections. These are simple, easy to connect with cold hands, and some can be worked up at home and quickly attached on the stream. When I can remember to do it, I loop and rig several tippets complete with attached flies at home, and simply loop these onto my leader when needed.

Where should fish be in the winter?

Remember that trout are cold-blooded animals, and thus are directly affected by their immediate environment. As the water temperature drops, so does their need for food.

Freestone stream tactics

Freestone streams, especially those containing wild brook trout, can be expected to produce some dry fly action until the water drops to 40 degrees. The action at 42 degrees will not be what it is at 58 degrees, but you can still get the trout up. An Adams or elk hair caddis in sizes 14 and 16 will usually do the job on top.

When the water temperature gets below 40 degrees in these freestoners, you are usually compelled to go underneath with nymphs and streamers. A size 12 or 14 hare's ear nymph and a size 8 or 10 dark stone fly nymph will bring lots of strikes. Black wooly buggers and white marabou muddlers in sizes 8 and 10 will also produce. These last two are usually considered to be minnow imitations, but they easily pass for a broad variety of food forms.

The techniques of fishing all these flies during the winter are the same as those used earlier, except that now you should slow down all aspects of the game. Make an extra effort to float the dry flies through the primary protected feeding stations in each pool and to

drift the nymphs and streamers as close to the stream bottom as possible. The trout will not move far to take their food in very cold water, so you have to get it close to them.

Limestone stream tactics

Tactics for limestone spring creeks are much like those of freestoners, with a few exceptions. The spring water entering these streams keeps their water temperatures considerably higher than the freestoners during the winter. Thus, expect to find more actively feeding trout.

Some of these spring creeks produce excellent hatches of blue-winged olive mayflies during the winter. When the emerging duns are concentrated, many nice browns can be found feeding on top. A sparsely dressed size 18 bluewinged olive dry fly on a 6x tippet can produce some good fishing.

Many of the spring creeks have excellent cress bug populations, and you can usually count on finding some fish feeding on them no matter how rough the weather becomes. I prefer to hunt for these working trout, instead of fishing the water, but both approaches can be successful. The actively feeding trout will often be located in water about a foot deep, making them fairly easy to spot.

By moving cautiously into position and casting a size 16 tanish-gray fur cress bug pattern about two feet above them, you can have some terrific fishing.

Some patterns that imitate sculpins and leeches also produce well on spring creeks during the winter. A productive method is to fish these patterns slowly wherever good overhead cover is found. If you are after the largest trout, a size 6 is about right, but sizes 8 and 10 will produce more strikes.

Fly rods that are 7½ to 9 feet long and that handle 4-weight or 5-weight lines are good for winter trout fishing. Because many trout, especially in freestone streams, may be holding in the deep runs and pools, you may want to consider a sinking-tip fly line, a custommade mini-leadhead, or one of the new sinking leaders that have sections of lead built into them. All three of these simplify the job of getting the flies down to the trout.

By paying attention to these small details, you'll see that winter trout fishing, although very demanding, can be immensely rewarding. PA

Othe, Christmas Present



by Dave Wolf

y hands trembled as I ripped the tissue paper packaging from the box. It was a present from my grandparents, or should I say Santa Claus. I was only five at the time, and to me, Santa was real, and so were sugar plums and all those other sweet things of youth. But there was calculating scheming behind the present. It was more than a mere gift from a jolly old man who slid down non-existent chimneys. It was a leading, coldly calculated attempt to make a fisherman and "a man" out of a five-year-old.

The tissue paper, now strewn like

confetti, was set aside, and beneath the elaborate packaging lay a gleaming green fiberglass rod and matching automatic reel—my very own outfit that was twice as long as I was and nearly as heavy.

An anxious grandfather began peeling the line from the reel, calling to me to get my coat, and announcing that there would be a practice session in the backyard. Already I was torn—there were still packages beneath the tree and I had high hopes that one of them was the Hopalong Cassidy gun and holster set that I had written to Santa for. Already I felt the pressure of my new present. My grandfather was not known for his patience and when I hesitated he shouted his order in a stronger and more demanding tone.

My fingers hurt and the runny nose sapped at my concentration, as I tried to cast the fly into a string circle. My grandfather was pacing, obviously upset, and my arm ached under the weight of the rod. The fun of casting was somehow lost in the cold winds that swept the scattered snow of the backyard. Finally, my grandfather had enough and walked back into the house in a huff.

I was happy with the arrangement, the warm house, the hot chocolate, and yes, the Hopalong Cassidy pistols and holsters.

The winter months were spent behind over-stuffed chairs with guns drawn, wiping out the invisible cowboys and Indians that attacked, one after another, riding invisible horses. The rod and reel, yes, they were somewhere either beneath my bed or in the closet upstairs—no, I did not practice in the backyard.

My forgotten present was to be brought front and center by the givers-the Santa Clauses that came in the form of grandparents who would not take no for an answer. I was cordially invited to spend a week in a cabin nestled in the mountains. Poe Valley in Centre County, to be exact. I knew the place well, because our family vacationed there often. It was a place to swing on wild grapevines and skip stones across crystal-clear waters—a place to climb trees and carve walking sticks. I did not think that trout fishing existed there, but then at five, I had given little thought to trout fishing.

A week away from home seemed interesting enough, and I knew that my love of the outdoors and all it had to offer would be fun, and the present, yes, I would take that along. I could spend a couple hours slinging that

thing around.

It was a long ride from my grandparents' home to the mountains in the dark and as usual I was carsick by the time we got there. The musty smell of the cabin was neat, and the fact that I could sleep on the couch was quite different from now, when my wife and I have one of those infrequent arguments—it was actually enjoyable.

I first suspected something was wrong when my grandmother stuffed a piece of jellied bread into my slack jaw when I was sleeping. "Time to get up," she laughed, "let's go fishing." I peered through the slits of eyelids, trying to focus in the dim light created by the Coleman lanterns. "It must be the middle of the night," I remember thinking. "We can't fish in the dark, can we?" I was advised that it was already four a.m. and that we had to be on Penn's Creek before sunrise. "The trout bite best then," my grandmother advised.

I would have complained more, if my grandfather wouldn't have shot me that cold glare of his. He had a way of letting me know when he had enough, and he already had had enough. We munched the eggs and bacon and scurried about the cabin. "Get your rod," my grandmother reminded me gently.

We arrived at the fog-covered stream in the still of the night. My

grandparents seemed tickled that no one was at the "best" spots they had previously chosen. There was no one on the stream, no one driving down the old road. In fact, the rest of the world was still sleeping—and I remember wishing that I was with the rest of the world.

The chill of the morning air brought life to my body. I was gabbing about trout and how many we would catch, and about how much fun this might be when my grandfather shot me another one of his glares. My grandmother then informed me that you only talk in

I lost my grip, and went cartwheeling off the branch into the cold waters of Penns, some six feet below.

whispers along trout streams, and then only when it's absolutely necessary—that such commotion scares the trout and we could then not catch them.

All Miles and All III

My grandmother led me Indian style to the stream bank, found a forked stick, baited my rod, and cast the line to the flow. She gently sat the rod into the stick and told me to sit and wait. "Watch the rod tip," she instructed. "When it dips, once, twice, on the third dip, strike."

She moved upstream 25 yards and cleared a seat for herself. Even at the age of five I knew she was putting distance between us for the sake of silence. Of course, it did not work. At first I sat as directed and watched the rod tip. One minute went by, then two, then I became mesmerized watching the flow go by the focal point of the rod tip, then I became dizzy and then nauseated. After five minutes I went over to talk to my grandmother. "Something must be wrong," I told her. "The rod tip is just bumping with the flow." She was a patient woman and told me that it might take longer than five minutes. I went back to my rod.

Another five minutes passed—

nothing, the rod simply dipping up and down in that nauseating fashion. I decided it was time to explore. I found a convenient tree, one that looked good for elimbing. Besides, 1 eould watch the rod tip from my elevated vicw, I remember thinking. I erawled a little farther onto the branch and began thinking that fishing wasn't all that bad after all. It was then that I lost my grip, and went cartwhceling off the branch into the eold waters of Penns, some six feet below. Kersplash! I don't really remember the fright, rather the eold, and I don't have the faintest idea why I didn't hurt myself, but by the time I reached shore, I am sure that if my grandmother believed in capital punishment I would have been a prime candidate.

After the verbal abuse grandmothers are so capable of handing out, I had high hopes that our day of fishing would come to an end. After all, no one would allow a youngster to run around soaking wet, would they? Of course, grandmothers also have motherly wisdom, and as I suggested we head back to the eabin, she pulled out of the tattered duffle bag a clean, dry set of clothes. I changed promptly in the car with strict orders that this was definitely the only clean and dry clothes she had brought for me, and that I should be extra eareful, and oh ves, no more tree elimbing.

Grandfather, who had been out of sight all morning, came back with three nice trout in the crecl, the first fish from the wilds I had ever seen. So this is what it's all about—a few scrawny creatures lying in the basket of ferns. Such a feat was smiled upon and even raved about, and I was told that there would be trout for breakfast.

With the new rush of enthusiasm I headed back to the forked stick, the rod still sitting there doing absolutely nothing. "Reel in!" my grandfather shouted. "You've scared all the fish for a mile. We have to move." I pulled the lever of the automatic reel, until the splitshot rattled through the guides. My grandfather told me that such a practice was forbidden, and I began to feel that maybe we were fishing for schizophrenie trout in a forbidden land.

The station wagon rattled down the

road, as I munched at the bologna sandwich my grandmother provided. Milk from a thermos tasted good, and a few chips and pretzels helped my attitude. Maybe there would be trout here, and maybe I would catch a few.

We followed the same procedure, sneaking Indian style to the bank, placing the forked sticks in the soggy bank, and my grandmother upstream by a good 50 yards. I watched the rod for 10 minutes without moving, something I attribute to renewed spirit. I glanced upstream and my grandmother was fighting a trout. I stumbled over my rod, kicked over the can of worms, and headed at a dead gallop toward her. The bank was slippery and I don't know what kept me from going back into the flow, but I never got wet—only muddy. My grandmother was amused with my enthusiasm and we ranted and raved over her catch.

I was sent back to my rod in time to find the tip dipping and diving. I waited for the third dip before driving the hook home (although the fish was hooked by then and the rod was probably gyrating for two minutes before I got there). The fish fought hard. No, it half-heartedly dived once before I vanked it from the stream unceremoniously onto the bank and then guarded it closely with both hands, screaming, "Grandma, grandma!" She unhurriedly came to my side and announced that I had taken a sunfish rather than a trout and that I was to put it back. "Put it back?" I stammered. "I've been here watching this stupid rod for nearly five hours and I'm to put it back?" My grandmother was taken back by the outrage of her grandchild, and after she recovered, became amused. "Yes," she explained, "we are only keeping trout, but you can have fun catching sunnies if you want." During the next half-hour I thought that I might like fishing. Sunfish after sunfish came skittering across the surface at the demand of the automatic reel that gave those fish no fighting chance at all, and I liked it that way. Then my grandfather came upstream with three more creeled trout and asked how we were doing. "Great," I explained, "I got five." "Five sunnies," my grandmother countered.

"Sunnies!" he yelled, "Ain't no trout here."



"What! A fish is a fish!" I argued. The glare came back, shot in my direction. The glare meant we were leaving, going away from my first fish of my life, looking for the elusive trout.

My grandmother took more fish and my grandfather the limit, and as darkness settled over the land, I withdrew the forked stick from the soggy earth and tossed it aimlessly to the weeds. I was fishless, and after 12 hours streamside, I decided that I didn't like fishing all that much—in fact, not at all.

The next day we spent on Penns as well, and the next, from 5:00 a.m. to 8:00 p.m. By the third evening without a trout, and only reprimands from playing in the dirt and skipping stones over the flow, I decided that without a doubt I hated fishing. I mean, I absolutely hated it.

The crowds that had gathered stood in amazement, and I had my first trout.

PRINCE OF THE PR

I believe that my grandparents sensed that I was not enjoying my week-long vacation. After supper, my grandfather said that tomorrow we would be going to Fisherman's Paradise and that I would in fact catch my first trout—he guaranteed it. Without giving away my age I will

tell you that the Fish Commission's Fisherman's Paradise in those days allowed one fish per day. When you took that one fish, you had to have it weighed and measured at the weigh-in station and you were finished for the day—no more fishing. I was issued a button and stood along the bank, rod in hand, waiting to cast. You see, a whistle blew at precisely 8 a.m., and vou were allowed to cast only after the whistle blew. Yes, I was excited. I already had my trout sighted, finning easily in the flow. There were bigger trout out there, but the crimson sides had intrigued me, and this being my first trout and all, I thought I should start with something not all too big.

The whistle blew and I cast, the trout completely ignoring my Honey Bug. I cast again, anxiously awaiting the inevitable strike, and on the sixth cast it came. I pushed the command button on the automatic reel and the trout started skittering across the surface. But the weight of the fish was too heavy, and he began fighting hard. The solution was simple. I slung the rod over my shoulder and ran up the bank behind me. The fish skittered and flopped on the water's surface. I was nearly out of running room when I looked over my shoulder to see the rainbow on the boulders, flopping and flipping his way back toward the water. The hook had come out! I dived head-first down the bank and somehow grasped the fish between my arms. My grandfather was standing on top of the hill, hysterical with laughter. The crowds that had gathered stood in amazement, and I had my first trout.

I carried him quite proudly to the weigh station. "Seventeen inches," the man announced. "Congratulations." My grandmother broke open the Boston creme pie in celebration, and I ate until I was ill. My grandparents winked and congratulated me, the Christmas present had worked, and my scheming grandparents had a fishing addict in hand.

The rod is broken, but stored for sentimental reasons, the reel, well-worn, has long been retired, and it, too, holds a special position in the storage of my fishing equipment. My grandparents have long passed on, but they have left behind the lasting effects of the Christmas present—a fisherman.

The Law & You

by Kerry Messerle

Q. After an ice fishing trip, I often have baitfish that I wish to keep. Can I keep these in a baitbox in a stream near my home?

A. Yes. Remember, however, that it is unlawful for any person to leave unattended any such container for fishbait or baitfish in any waters of the Commonwealth unless it has attached a tag with your name, address, and telephone number.

Q. Can I use a power auger to drill holes in the ice on a Fish Commission-owned lake?

A. Yes.

Q. I know in certain instances that it is unlawful to field dress my catch. We often take a skillet and stove onto the ice and eat our catch while fishing. Is this permissible?

A. Yes, if your catch met all requirements regarding season, sizes, and limits.

Q. After the fall trout stocking when the limit is only 3 trout, I like to keep my catch alive in a bucket or on a stringer so that if any fish I catch is bigger than the one I already have, I might release the smaller one and keep the bigger one. My friends say I'm breaking the law. Who is correct—me or them?

A. They are. Any fish not immediately returned to the water from where it was taken is considered part of your possession limit. Thus, as soon as you bucket or string your third trout, any trout caught that same day places you over the lawful limit and must be immediately released.

Q. During the period when ducks are in season, I like to fish and hunt at the same time. Is this lawful?

A. Yes, as long as you are properly licensed.

Kerry Messerle is supervisor of the Commission Law Enforcement Northeast Region.

U.S. Coast Guard Offers Consumers Information and Assistance

The consumer affairs staff of the U.S. Coast Guard provides a central point of contact for consumers or users of Coast Guard services who have questions or complaints concerning Coast Guard programs and policies.

Although established to deal primarily with boating safety, the consumer staff also assists consumers who want information on other public-oriented Coast Guard programs such as vessel documentation, commercial vessel operator licenses, aids-to-navigation services, drawbridge operations, water pollution, search-and-rescue services, and vessel boardings for law enforcement purposes.

The consumer staff produces and distributes information on Coast Guard activities and policies through press releases, media articles, a newsletter called the *Boating Safety Circular*, and a series of Coast Guard consumer fact sheets. The fact sheets cover topics of interest to consumers—for example, the "Pros and Cons of Documenting a Boat," "Marine Sanitation Devices on Boats," and "Sources of Boating Safety Education." Single copies of the *Boating Safety Circular* and fact sheets are available at no charge.

The consumer staff also operates a toll-free Boating Safety Hotline: 800-368-5647. The hotline is available Monday through Friday from 8 a.m. to 4:30 p.m. It's designed to do three things: (1) tell boat owners and buyers whether a particular boat model has been involved in a safety recall (in some recalls, manufacturers are only able to notify a small percentage of current owners); (2) take reports from owners concerning safety problems in their boats to determine if a safety recall is warranted; and (3) answer questions on boating safety.

For additional information on U.S. Coast Guard programs, call or write the Commandant (G-BC), U.S. Coast Guard, 2100 Second Street, SW, Washington, D.C. 20593. The phone number is 800-368-5647.

11 Boating Safety Organizations Receive U.S. Coast Guard Grants

A Coast Guard panel has awarded \$700,000 to 11 boating safety organizations. The panel selected 15 projects for funding from 36 proposals received by the Coast Guard's Office of Boating, Public and Consumer Affairs.

The candidates for funding from the National Non-Profit Public Service Organization Grant Programs were rated for feasibility (probability of success), impact, and cost. Funding is limited to programs carried out by national non-profit organizations.

Organizations receiving grants are:

- American Boat and Yacht Council
- American Boat Building and Repairers Association
- BOAT/U.S. Foundation
- Marine Retailers Association
- National Association of State Boating Law Administrators
- National Fire Protection Association
- National Safe Boating Council, Inc.
- National Safety Council
- Underwriters Laboratories Inc.
- U.S. Canoe Association
- Young Men's Christian Association Projects include the development of boating education brochures, public service announcements, film and written material of PFDs, video training tapes on boating safety, an instructional videotape on canoe safety, and others.

Scholastic Writing Contest

To encourage high school students to sharpen their ability to communicate the outdoor experience, annual awards of \$500, \$300, and \$200 are offered for published articles in newsletters, newspapers, magazines, and other publications. The awards program is sponsored by the Outdoor Writers Association of America (OWAA) in cooperation with the Izaak Walton League Endowment.

For a copy of the guidelines and other information, contact OWAA at 2017 Cato Avenue, Suite 101, State College, PA.

ANGLERS CURRENTS

CONSERVE 87

CONSERVE 87, the ninth in a series of award-winning calendars, is published by the Western Pennsylvania Conservancy, the state's largest private land conservation organization.

The 1987 calendar features a

selection of previously unpublished works of Andrey Avinoff, a Russian-born artist and scientist who was director of the Carnegie Museum from 1926 to 1945. Except in an occasional exhibition, most of the featured watercolors have never been seen in public. The calendar also includes its traditional listing of

hundreds of places to go, things to do, and interesting facts about the natural world.

The calendar can be ordered for \$6 each plus 6 percent sales tax by writing to: Western Pennsylvania Conservancy, 316 Fourth Avenue, Pittsburgh, PA 15222.

ANGLERS NOTEBOOK

by Dave Wonderlich

Fat smallmouths can be taken right up until the waterway freezes by fishing slow and deep. Try jigging spoons in dropoffs near ledges in 10 to 50 feet of water.

Cork fishing rod handles get slippery and dirty after a few trips along the stream. Scrub your rod handle with soap and water for a new look and better grip.

Instead of changing areas on the lake when ice fishing is slow, vary the depth and baits that you are using. If you remember the depth and bait for each tipup, you'll have the key to success after catching your first fish.

More and more ice fishermen are using their portable fish finders to locate fish through the ice.

When buying your next fishing reel, check out the metal used on the gears inside. Brass wears much better, and over the long run will provide smoother action than white metal.

A steel post bar with a wedge-shaped point, used to dig fence post holes, makes an ice fishing hole cutter that is hard to beat. Try hardware and agricultural supply stores.

This winter, take inventory of your lures so that you know what needs fixing and replacement. But consider also the sizes of your favorite lures. Instead of buying more lures in the same size and different colors, pick a few good patterns and buy lures in different sizes. Sometimes the size of the lure, not the pattern, is the change that fools a fish.

Think about the waterways closest to your home. Consider them next spring. A quiet pond or small stream can provide good fishing close to home without the need for a big boat or high-tech electronics.

Don't ice fish on rivers or streams. It is dangerous because the current under the ice makes thin weak spots. You can't tell where the current is so your next step could be into deep water.

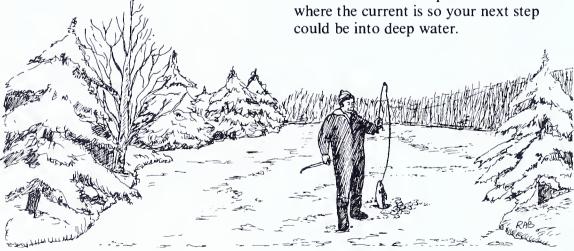


illustration — Rose Boegli



Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and the ideals of safe boating aroptimum boating opportunities

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MAIL



Here is a photo of my 3-year-old granddaughter with her first fish. She caught six bluegills and one catfish in about an hour from my farm pond in Butler County. Needless to say, she was a very happy girl.—Donald E. McCandless, Jr., Broomall, PA.

I am very happy to be getting this long overdue letter off to you. I have been the grateful recipient of your fine magazine for the past two years: one year in Saudi Arabia and this year in Indonesia.

I had always been an avid fisherman and dearly missed angling in the beautiful waterways of Pennsylvania. By getting your magazine each month I have been able to keep up to date on all the latest techniques and regulations, and most importantly, I maintain a precious contact with my favorite pastime. Needless to say, your Pennsylvania Angler is also shared by many others who wish they were wetting lines on the weekends.

Beginning soon my wife and I will once again be living in Saudi Arabia. I hope that I can continue to receive your magazine at the new address, and that this is not a problem for you.

Thank you for a taste of home while I must be far away.—Jeffrey R. Barber, Riyadh, Saudi Arabia

I would like to take this opportunity to congratulate you on the fine job you have done, especially providing quality fishing in the Monongahela River. In late July last year, a friend and I decided to try our



luck fishing the Mon near the Monesson-California area. The fishing was exceptional.

As a young boy growing up in the Braddock area, in the 1950s, I never anticipated catching smallmouth bass, largemouth bass, or walleye out of the Mon. How wrong I was!

The enclosed picture shows Dr. Robert Pitney, from the Delmont-Murrysville area, with a 7-pound walleye that he caught on this trip. Thanks for an afternoon of pleasant memories, and keep up the good work.—Dr. Robert J. Thomas, Murrysville, PA

TOTAL QUANTITY PRICE Ball cap — "Fish _____ Pennsylvania" \$5.00 Ball cap — "Pennsylvania Boater" \$18.75 Fillet knife \$1.00 "Paddle Pennsylvania" \$3.00 Pennsylvania Anglers' Cookbook \$2.00 **PLAY** memberships **\$6/\$16** _ PA Angler magazine subscriptions \$4/\$11 _____ **Boat PA** magazine

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Ball caps

Choose from two kinds — "Fish Pennsylvania" and "I'm a Pennsylvania Boater." These hats feature highquality mesh with rugged denim. The fishing cap has a handy license holder on the left side. One size fits all, with convenient plastic-pegged adjustment.

Fillet knife

Here's a fillet knife for the discriminating angler-chef. The 6-inch stainless steel blade extends through a handle of ivory-colored Delrin, which is contoured for a firm grip. Embedded in clear acrylic in the handle is the inscription "PENNSYLVANIA FISH COMMISSION — Established 1866," and the familiar Fish Commission keystone logo appears on the handle. This knife is a utensil of quality.

Paddle Pennsylvania

Section-by-section detailed descriptions of some 18 Pennsylvania waterways highlight this publication, a 36-page guide for all Keystone State canoeists. In addition you'll find useful information on canoe safety, planning trips, camping, and white water. Each waterway is divided into numbered sections, keyed to the map, with detailed descriptions.

Pennsylvania Anglers' Cookbook

This 168-page Commission classic belongs in every angler's kitchen. You'll find a thorough treatment of every aspect of fish cookery with recipes for everything from bass to walleye. The book also contains the details on smoking, pickling, canning, and freezing fish, and special chapters include information on preparing frogs, snakes, mussels, and turtles. Two special sections have recipes for batters and sauces. All recipes and other preparations were solicited from Pennsylvania Angler readers.

PLAY membership

The Pennsylvania League of Angling Youth (PLAY) is ar educational program specifically designed for youngsters. Members receive a colorful jacket patch, a quarterly newsletter, special Fish Commission publications, and access to the PLAY Correspondence Center.

Pennsylvania Angler, Boat Pennsylvania subscriptions

Pennsylvania's official fishing and boating magazines let you give the gift of year-round fishing and boating fun Both magazines offer first-hand information on Pennsylvania waterways, rules and regulations that affect your sport, where to find the best action, and how to improve your skills. An announcement card will be sent to gift subscription recipients.

The order form for these gifts appears on page 31







